


Service Manual

Dolby NR-Equipped
Stereo Double Cassette Deck

Cassette Deck
RS-X920

Simplified

 **DOLBY B-C NR HX PRO**

Colour

(K)... Black Type



Area

| Suffix for Model No. | Area | Colour |
|----------------------|--------------------|--------|
| (E) | Europe. | (K) |
| (EB) | Great Britain. | |
| (EG) | Germany and Italy. | |

- Please file and use this manual together with the service manual for Model No. RS-X902, Order No. AD9103047C2.
- This service manual indicates the main differences between; Original RS-X902.

LINE-UP OF COMPONENTS

| System Name | Unit |
|--------------|---|
| SC-X920 (E) | ST-X902LA (E) : Tuner |
| | SU-X920D (E) : Amplifier |
| | RS-X920 (E) : Cassette Deck |
| | — : CD Player |
| | SL-J110R (E) : Turntable |
| | SB-CS95 (E) : Speaker (Made in PAES) |
| SC-X920 (EB) | ST-X902LA (EB) : Tuner |
| | SU-X920D (EB) : Amplifier |
| | RS-X920 (EB) : Cassette Deck |
| | SL-PJ38A (EB) : CD Player (Made in MBV) |
| | SL-J110R (EB) : Turntable |
| | SB-CS95 (E) : Speaker (Made in PAES) |
| SC-X920 (EG) | ST-X902LA (EG) : Tuner |
| | SU-X920D (EG) : Amplifier |
| | RS-X920 (EG) : Cassette Deck |
| | SL-PJ38A (EG) : CD Player (Made in MBV) |
| | SL-J110R (EG) : Turntable |
| | SB-CS95 (E) : Speaker (Made in PAES) |

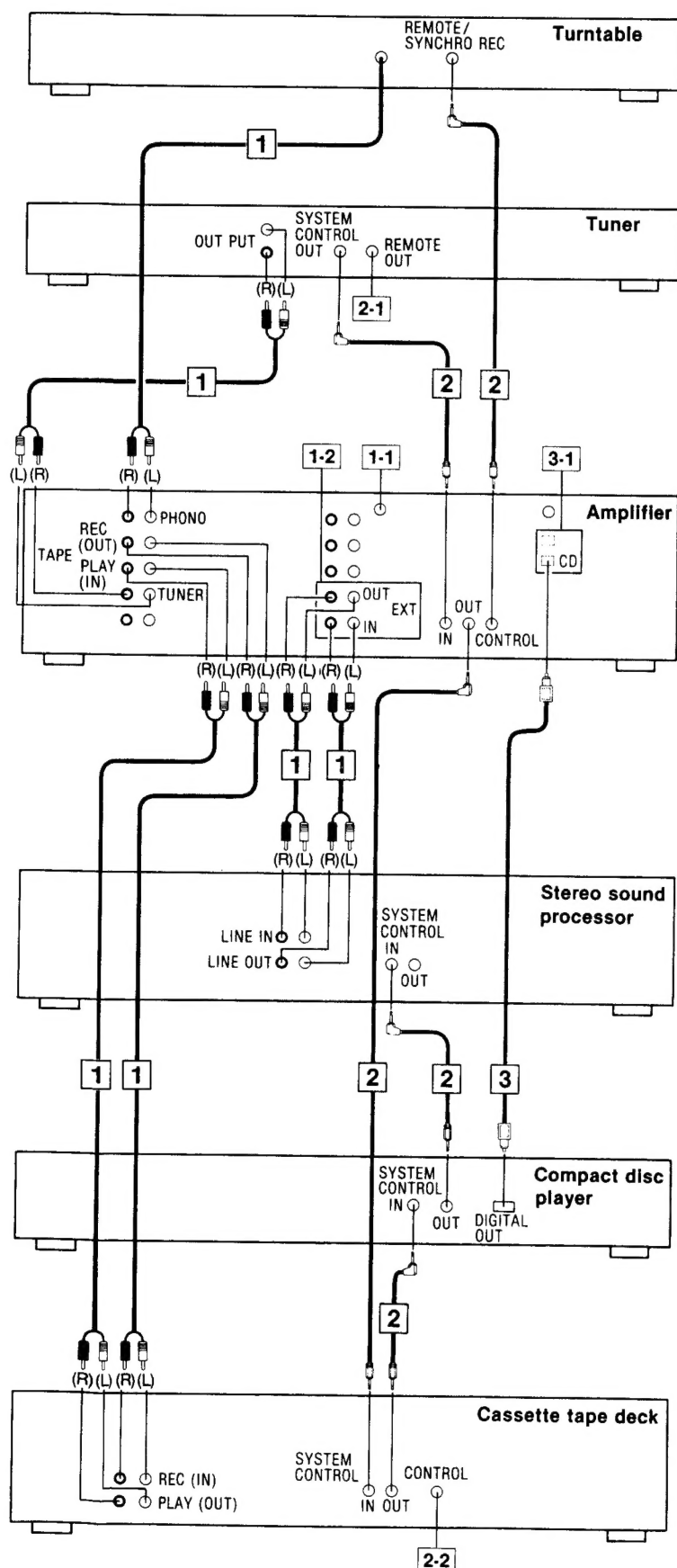
| System Name | Unit |
|--------------|---|
| SC-X920 (EI) | ST-X902LA (EI) : Tuner (Made in PFS) |
| | SU-X920D (EG) : Amplifier |
| | RS-X920 (EG) : Cassette Deck |
| | SL-PJ38A (EG) : CD Player (Made in MBV) |
| | SL-J110R (EG) : Turntable |
| | SB-CS95 (E) : Speaker (Made in PAES) |
| SC-X920 (EF) | ST-X902LA (EF) : Tuner (Made in PFS) |
| | SU-X920D (E) : Amplifier |
| | RS-X920 (E) : Cassette Deck |
| | SL-PJ38A (E) : CD Player (Made in MBV) |
| | SL-J110R (E) : Turntable |
| | SB-CS95 (E) : Speaker (Made in PAES) |

* HX Pro headroom extension originated by Bang & Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation.
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Technics

CONNECTIONS



Connections of each unit



Connection diagrams shown are for connections to a Technics hi-fi component system. Make connections in the numbered sequential order.

- 1 **Connect the stereo connection cables** (included with the turntable, tuner, stereo sound processor, and cassette tape deck).

Stereo connection cable

White (L) 
Red (R) 

1-1

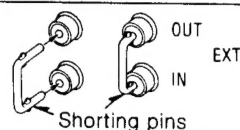
“GND” terminal of the amplifier

This terminal is for use with a turntable which has a ground wire.

1-2

“EXT” terminals of the amplifier

When these terminals are not in use, be sure to insert the “shorting” pins (included).



- 2 **Connect the L-type cable** (included with the turntable, tuner, stereo sound processor, compact disc player, and cassette tape deck).

2-1

“REMOTE OUT” terminal

This terminal is used to connect to the “REMOTE IN” terminal of the Technics multi-compact disc player (not included).

2-2

“CONTROL” terminal

Make a connection from this terminal to the “CONTROL” terminal for a cassette deck on a Technics multi compact disc player.

(For detailed information, refer to the operating instructions of the Technics multi compact disc player.)

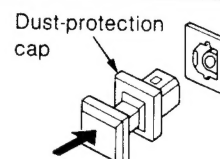
- 3 **Connect the optical-fiber cable** (included with the compact disc player).

3-1

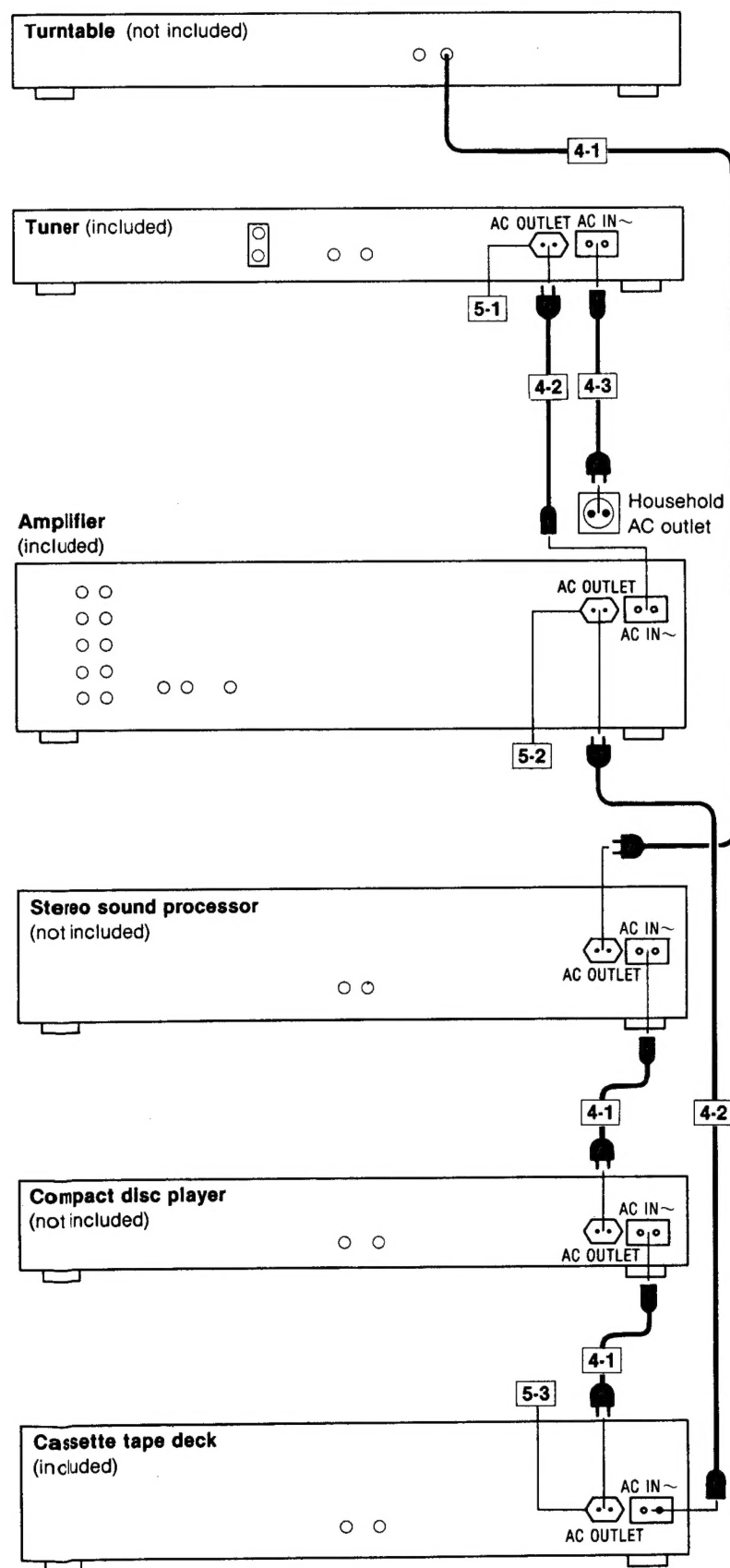
“DIGITAL IN” (CD, DAT) terminals of the amplifier

These terminals are protected by the dust-protection caps to avoid damage by the dust, etc. Remove the caps only when the “DIGITAL IN” terminals are to be used.

When these terminals are not being used, attach the caps as shown in the illustration below.



Connections of each unit (continued)



- 4 Connect the AC power supply cords.**
- 4-1** Connect the AC power supply cords (not included).
- 4-2** Connect the AC power supply cords (short for continental Europe) (included).
- 4-3** Connect the AC power supply cord (long for continental Europe) (included).

Connect this cord only after all other cables have been connected.

For areas except continental Europe

If the power plug will not fit your socket, use the power plug adaptor (included).



Notes:

- Configuration of the AC outlets and AC power supply cords differ according to area.
- If the compact disc player is not used in combination with these components, connect the AC power supply cord of the stereo sound processor to the AC outlet of the cassette deck.

5 "AC OUTLET"

5-1 "SWITCHED" outlet

Power is controlled by the power switch. Audio equipment rated up to 500 W can be connected here.

5-2 "UNSWITCHED" outlet:

Power is always available, regardless of power switch. Audio equipment rated up to 60 W can be connected here.

5-3 "UNSWITCHED" outlet:

Power is always available, regardless of power switch. Audio equipment rated up to 100 W can be connected here.

Note:

If other audio equipments are to be connected to these outlets, make sure that the total power consumption does not exceed the rating of each outlet.

After other units have been connected, tie up the cords in a bundle with a clip, etc. and place them behind the units.

CHANGE IN REPLACEMENT PARTS LIST (on pages 32~36, 39, 40, 45)

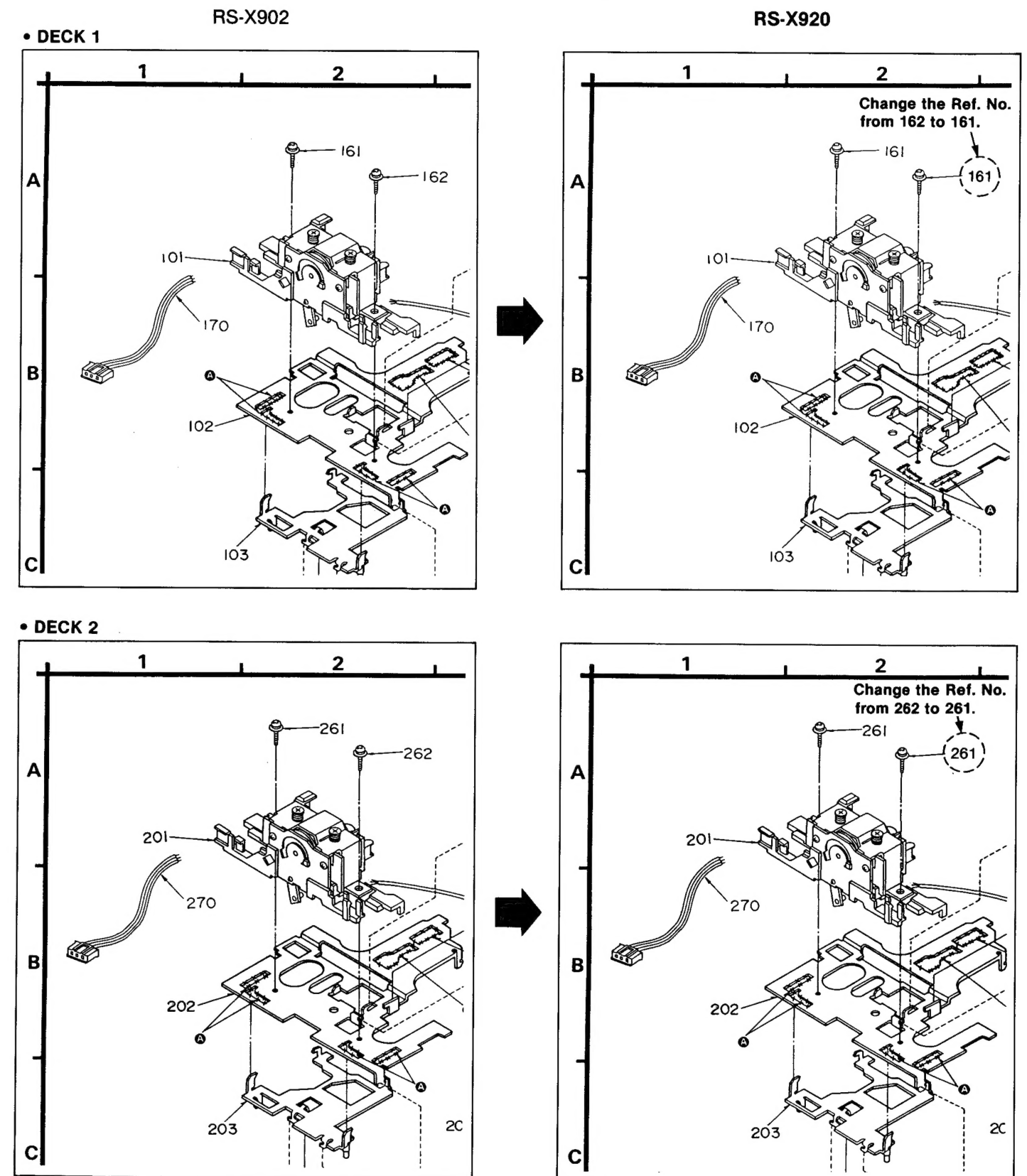
- Notes:**
- Mentioned in this parts list is only those different from Model No. RS-X902 (E). All other parts are the same as for RS-X902 (E).
 - Important safety notice: Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

| Ref. No. | Change of Part No. | | Part Name & Description | Remarks |
|-----------------------|--------------------|---------------------|----------------------------|-----------|
| | RS-X902 (E) | RS-X920 (E, EB, EG) | | |
| INTEGRATED CIRCUIT(S) | | | | |
| IC971 | DN6851ALB | LB9051A-WD | HALL (DECK 1) | |
| IC971A | DN6851ALB | LB9051A-WD | HALL (DECK 2) | |
| TRANSISTOR(S) | | | | |
| Q5 – 8 | KSA1175YGTA | 2SA1309A-R | TRANSISTOR | |
| Q9 – 14 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q103, 104 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q107, 108 | KSA1175YGTA | 2SA1309A-R | TRANSISTOR | |
| Q109 – 112 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q303 | KSB564ACYGTA | 2SB621A-R | TRANSISTOR | |
| Q353 | KSB564ACYGTA | 2SB621A-R | TRANSISTOR | |
| Q551 | KSA1175YGTA | 2SA1309A-R | TRANSISTOR | |
| Q607 | KSB564ACYGTA | 2SB621A-R | TRANSISTOR | |
| Q816 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q905 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q911 | KSA1175YGTA | 2SA1309A-R | TRANSISTOR | |
| Q918 | KSA1175YGTA | 2SA1309A-R | TRANSISTOR | |
| Q929 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| Q932 | KSC2785YGTA | 2SC3311A-Q | TRANSISTOR | |
| CONNECTOR(S) | | | | |
| CN4 | RJS1A1704 | RJS1A6604 | CONNECTOR (4 P) | |
| CN6 | RJS1A1704 | RJS1A6604 | CONNECTOR (4 P) | |
| CN600A | RJS1A1703 | RJS1A6603 | CONNECTOR (3P) | |
| CN600B | RJS1A1703 | RJS1A6603 | CONNECTOR (3P) | |
| JACK(S) | | | | |
| JK702 | RJS1A4902-B | RJS1A4802-B | AC OUTLET | (EB) △ |
| | | RJS1A4902-B | AC OUTLET | (E, EG) △ |
| FLAT CABLE(S) | | | | |
| W3 | RWJ0210200QQ | RWJ5710200QQ | FLAT CABLE (10P) | |
| W5 | RWJ0210200QQ | RWJ5710200QQ | FLAT CABLE (10P) | |
| W8 | RWJ0210200KQ | RWJ5710200KQ | FLAT CABLE (10P) | |
| RESISTORS | | | | |
| R35, 36 | ERDS2TJ474 | ERDS2TJ394 | C. RESISTOR, 1/4W, 390kΩ | |
| R141, 142 | ERDS2TJ103 | ERDS2TJ562 | C. RESISTOR, 1/4W, 5.6kΩ | |
| R144, 145 | ERDS2TJ103 | ERDS2TJ562 | C. RESISTOR, 1/4W, 5.6kΩ | |
| CAPACITORS | | | | |
| C7 – 10 | ECBT1H561KB5 | ECBT1H471KB5 | C. CAPACITOR, 50V, 470pF | |
| C13, 14 | ECEA0JKA101B | ECEA1AU101 | E. CAPACITOR, 10V, 100μF | |
| C15, 16 | ECQB1H682JZ3 | ECQB1H822JF3 | C. CAPACITOR, 50V, 8200pF | |
| C21 | ECEA0JKA101B | ECEA1AU101 | E. CAPACITOR, 10V, 100μF | |
| C57, 58 | ECEA1AKA470B | ECEA1CKA470B | E. CAPACITOR, 16V, 47μF | |
| C131, 132 | ECQB1H822JZ | ECQB1H153JF3 | C. CAPACITOR, 50V, 0.015μF | |
| C135, 136 | ECQB1H822JZ | ECQB1H153JF3 | C. CAPACITOR, 50V, 0.015μF | |

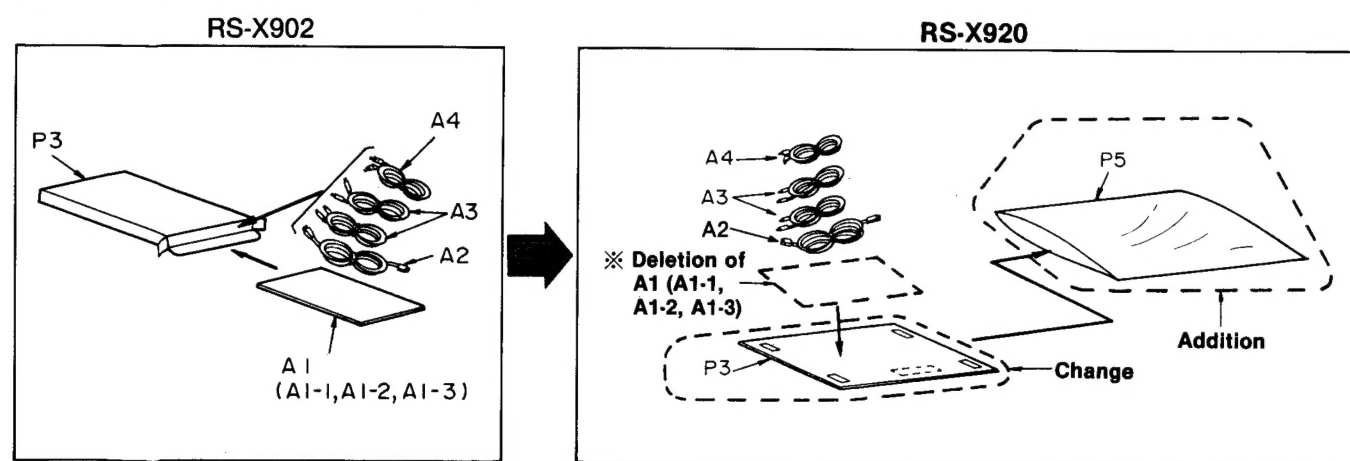
| Ref. No. | Change of Part No. | | Part Name & Description | Remarks |
|----------------------|--------------------|---------------------|------------------------------|----------------|
| | RS-X902 (E) | RS-X920 (E, EB, EG) | | |
| CABINET AND CHASSIS | | | | |
| 3 | RYF0136-K | RYF0136B-K | CASSETTE LID (DECK 1) | |
| 4 | RYF0137-K | RYF0137B-K | CASSETTE LID (DECK 2) | |
| 6 | RGR0102C-D | RGR0102B-D1 | REAR PANEL | (EB) |
| | | RGR0102C-F1 | REAR PANEL | (EG) |
| | | RGR0102C-H1 | REAR PANEL | (E) |
| 7 | RJS1A4902-A | RJS1A4802-A | AC OUTLET COVER | (EB) |
| | | RJS1A4902-A | AC OUTLET COVER | (E, EG) |
| 13 | RGG0066-K | RGG0066B-K | FRONT AL PANEL | |
| 14 | RFKGSX502E-K | RFKGSX520E-K | FRONT PANEL ASS'Y | |
| PACKING MATERIAL | | | | |
| P1 | RPG0845 | RPG1209 | PACKING CASE | |
| P3 | SPSD152 | RPQ0164 | ACCESSORIES PAD | |
| P4 | SPP756 | XZB50X65A02Z | PROTECTION COVER (UNIT) | |
| P5 | —— | XZB24X34C04 | PROTECTION BAG (ACCESSORIES) | Addition |
| ACCESSORIES | | | | |
| A1 | RQF1078 | —— | INSTRUCTION MANUAL UNIT | (E) Deletion |
| | | —— | INSTRUCTION MANUAL UNIT | (EB) Deletion |
| | | —— | INSTRUCTION MANUAL UNIT | (EG) Deletion |
| A1-1 | RFKSSX902E-K | RFKSCX520DEK | INSTRUCTION MANUAL ASS'Y | (E) |
| | | RQT1493-D | INSTRUCTION MANUAL | (EG) |
| | | RQT1494-B | INSTRUCTION MANUAL | (EB) |
| A2 | SJA187 | RJA0018-1K | AC POWER SUPPLY CORD | (E, EG) △ |
| | | SJA188 | AC POWER SUPPLY CORD | (EB) △ |
| A3 | SJP2249-3 | SJP2276 | STEREO CONNECTION CABLE | |
| MECHANISM PARTS LIST | | | | |
| DECK 1 | | | | |
| 161 | XTW2+6L | | SCREW | Change of Pcs. |
| 162 | XTW2+8L | —— | SCREW | Deletion |
| DECK 2 | | | | |
| 261 | XTW2+6L | | SCREW | Change of Pcs. |
| 262 | XTW2+8L | —— | SCREW | Deletion |

EXPLODED VIEWS (on pages 41, 43.)

• Mechanical parts



PACKAGING (on page 31.)



Service Manual

Dolby NR-Equipped
Stereo Double Cassette Deck

Cassette Deck
RS-X902



Color

(K)... Black Type

Area

| Country Code | Area | Color |
|--------------|-------------------------|-------|
| (E) | Continental Europe. | (K) |
| (EB) | Great Britain. | |
| (EG) | F.R. Germany and Italy. | |

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MECHANISM SERIES (AR300)

SPECIFICATIONS

■ CASSETTE DECK SECTION

| | |
|--|-------------------------|
| Deck system | Stereo cassette deck |
| Track system | 4-track, 2-channel |
| Heads | |
| (tape deck 1) Rec/play | Permalloy head |
| Erasing | Double-gap ferrite head |
| (tape deck 2) Rec/play | Permalloy head |
| Erasing | Double-gap ferrite head |
| Motors | |
| (tape deck 1) Capstan | DC servo motor |
| (tape deck 2) Capstan | DC servo motor |
| Recording system | AC bias |
| Bias frequency | 80 kHz |
| Erasing system | AC erase |
| Tape speeds | 4.8 cm/sec. (1 7/8 ips) |
| Frequency response | |
| NORMAL | 30 Hz~16 kHz |
| | 40 Hz~15 kHz (DIN) |
| CrO ₂ | 30 Hz~17 kHz |
| | 40 Hz~16 kHz (DIN) |
| METAL | 30 Hz~18 kHz |
| | 40 Hz~17 kHz (DIN) |
| S/N (signal level=max recording level, CrO ₂ type tape) | |
| Dolby C NR on | 74 dB (CCIR) |
| Dolby B NR on | 66 dB (CCIR) |
| Dolby NR off | 56 dB (A weighted) |

Wow and flutter 0.07% (WRMS)
±0.2% (DIN)

Fast forward and rewind times
Approx. 110 seconds with C-60 cassette tape

Input sensitivity and impedance
LINE IN 60 mV/47 kΩ

Output voltage and impedance
LINE OUT 400 mV/800Ω

■ GENERAL

| | |
|--------------------|--|
| Power consumption | 20 W |
| Power supply | AC 50 Hz/60 Hz, 230-240 V |
| Dimensions (W×H×D) | 360 × 129 × 297 mm (14 ³ / ₁₆ " × 5 ³ / ₃₂ " × 11 ¹¹ / ₁₆ ") |
| Weight | 4.6 kg (10.1 lb.) |

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

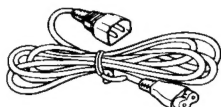
Technics

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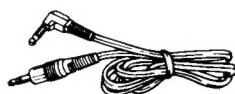
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ACCESSORIES



AC power supply cord
(SJA187) (E, EG) 1 pc.
(SJA188) (EB)



L-type cable
(SJP2257T) 1 pc.

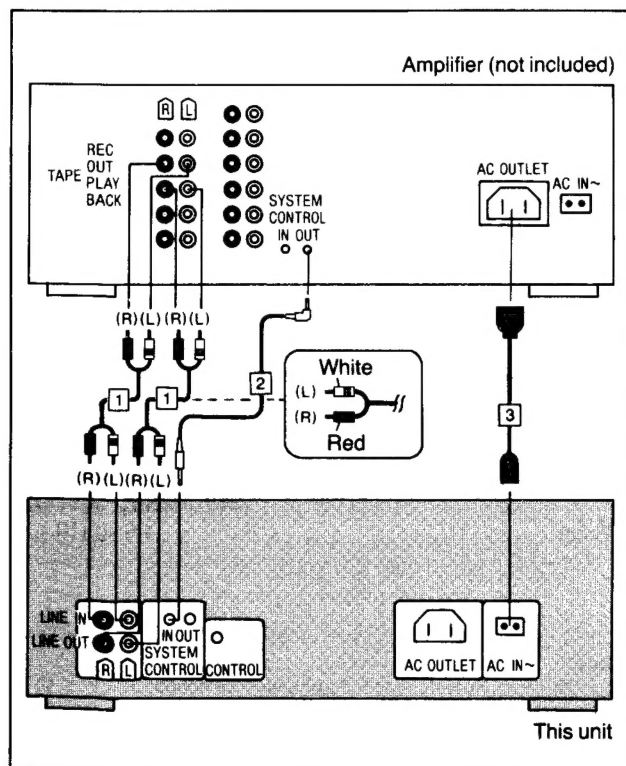


Stereo connection cables
(SJP2249-3) 2 pcs.

CONNECTIONS

Make connections in the numbered sequence by using the included cables.

- 1 Connect the stereo connection cables.
- 2 Connect the L-type cable.
- 3 Connect the AC power supply cord to the "AC OUTLET" of the amplifier or the household AC outlet.



The illustration at the left shows an example of connections made when this unit is combined with a Technics hi-fi component system, and shows only the connections to be made to and from this unit in that combination.

Refer to the illustration together with the instructions provided below.

"SYSTEM CONTROL IN" terminal

Make a connection from this terminal to the "SYSTEM CONTROL OUT" terminal for a cassette deck on a Technics amplifier. (For detailed information, refer to the operating instructions of the Technics amplifier.)

"SYSTEM CONTROL OUT" terminal

Make a connection from this terminal to the "SYSTEM CONTROL IN" terminal of a Technics stereo sound processor or to the "SYSTEM CONTROL IN" terminal of a Technics compact disc player.

(For detailed information, refer to the operating instructions of the Technics stereo sound processor or the Technics compact disc player.)

"CONTROL" terminal

Make a connection from this terminal to the "CONTROL" terminal for a cassette deck on a Technics multi compact disc player. (For detailed information, refer to the operating instructions of the Technics multi compact disc player.)

AC power supply cord (3)

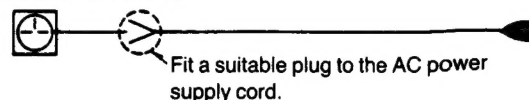
Notes:

- The configuration of the AC outlet and AC power supply cord differs according to area.
- If this unit is not to be connected with the amplifier, the cord is to be connected to the household AC outlet.

For United Kingdom

Cut off and dispose of the plug and replace with a suitable plug. (Refer to "For United Kingdom" above.)

Household AC outlet

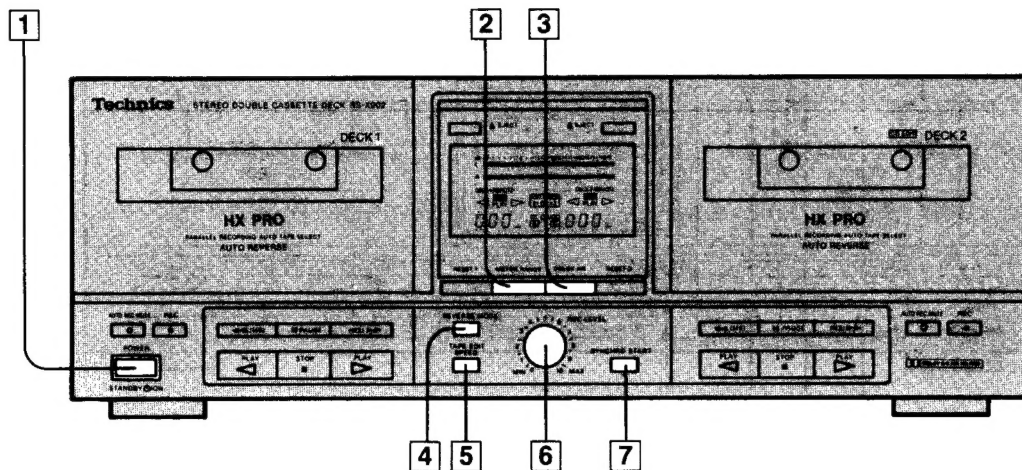


"AC OUTLET"

"UNSWITCHED" outlet

Power is always available, regardless of power switch. Audio equipment rated up to 100 W can be connected.

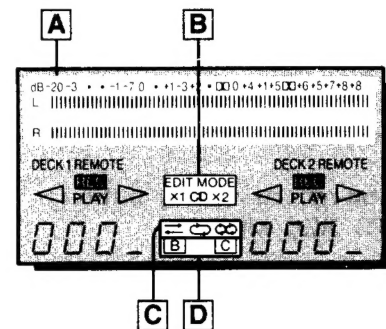
LOCATION OF CONTROLS



Controls common to both tape decks

- 1 Power "STANDBY ⏻ /ON" switch (POWER, STANDBY ⏻ /ON)**
This switch switches ON and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the STANDBY ⏻ position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.
- 2 Meter-range selector (METER RANGE)**
This selector can be used to select the meter-range display of the input level meter.
- 3 Dolby noise-reduction selector (DOLBY NR)**
This selector can be used to reduce the hiss noise that is characteristic of tape. This unit is provided with both the B-type and C-type noise-reduction systems.
- 4 Reverse-mode selector (REVERSE MODE)**
This selector can be used for selection of the reverse mode (for either playback or recording).
- 5 Tape-to-tape recording tape-speed selector (TAPE EDIT SPEED)**
This selector can be used to select the recording speed when a tape-to-tape recording is made.
- 6 Recording-level control (REC LEVEL)**
This control can be used to regulate the recording level of both tape decks.
- 7 Synchro-start button (SYNCHRO START)**
This button can be used to start a tape-to-tape recording, simultaneously starting tape deck 1 (the playback deck) and tape deck 2 (the recording deck).

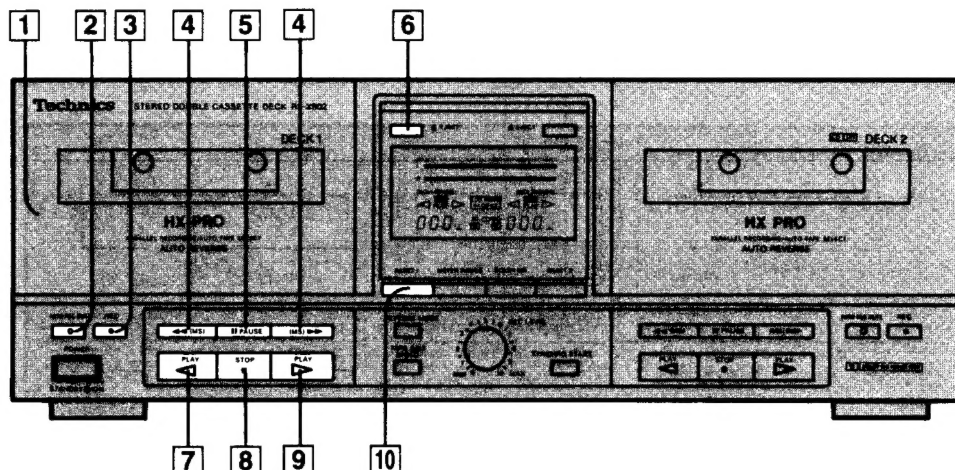
Indicators common to both tape decks



- A Input level meter**
During playback, this meter indicates the level of the recorded sound source.
During recording, it indicates the level being recorded, adjusted by the recording-level control.
- B Edit-recording indicators (EDIT MODE, CD, $\times 1$, $\times 2$)**
The words "EDIT MODE" and " $\times 1$ " (or " $\times 2$ ") indicator will illuminate when a tape-to-tape recording is made.
The words "EDIT MODE" and "CD" indicator will illuminate when a CD edit-recording is made.
- C Reverse-mode indicators (⏮ , ⏪ , ⏩ , ⏭)**
One of these indicators illuminates to show which of the reverse modes was selected by the reverse-mode selector.
- D Dolby noise-reduction indicators (B, C)**
One of these indicators illuminates to show the type of Dolby noise-reduction system selected by pressing the Dolby noise-reduction selector.

Tape deck 1

Tape deck 2



Controls applicable to tape decks 1 and 2

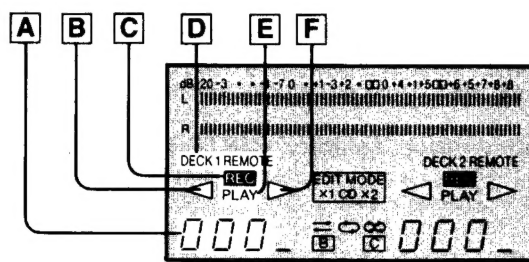
Both tape deck 1 and tape deck 2 have the same controls, indicators, etc., and have the same functions, so the following explanation, although for tape deck 1, is equally applicable to tape deck 2.

- 1 Cassette holder**
- 2 Automatic-record-muting button (○ AUTO REC MUTE)**
This button can be used to make a silent interval on the tape being recorded on the tape deck.
- 3 Record button (● REC)**
This button can be used to change the tape deck to the recording stand-by mode.
- 4 Fast-forward/rewind/search buttons [◀◀ (MS), (MS) ▶▶]**
These buttons can be used to fast-forward or rewind the tape, or to easily search for a tune's beginning quickly.
- 5 Pause button (|| PAUSE)**
This button can be used to temporarily stop the tape playback or recording of the tape deck.
- 6 Eject button (▲ EJECT)**
This button can be used to open the cassette holder.
- 7 Reverse-side playback button (◁ PLAY)**
This button can be used to start the playback or recording of side "B" of the cassette.
(The tape will then begin moving in the right-to-left direction.)
- 8 Stop button (■ STOP)**
This button can be used to stop tape movement.
- 9 Forward-side playback button (▷ PLAY)**
This button can be used to start the playback or recording of side "A" of the cassette.
(The tape will then begin moving in the left-to-right direction.)

10 Tape counter reset button (RESET 1, RESET 2)

This button can be used to reset the tape counter indication to "000".

Indicators applicable to tape decks 1 and 2

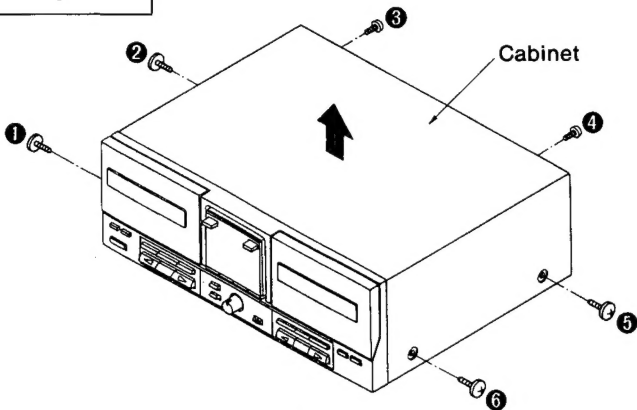
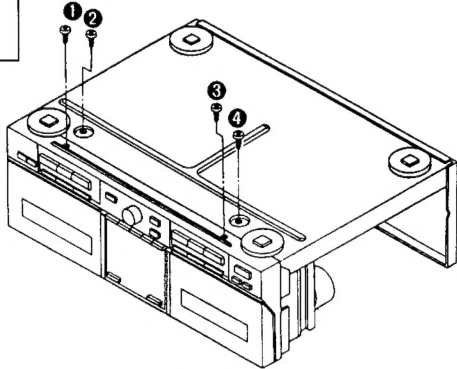
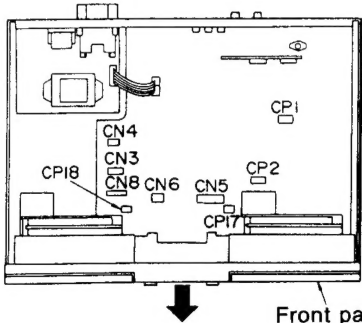
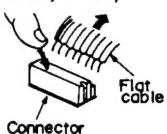
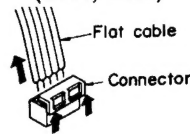
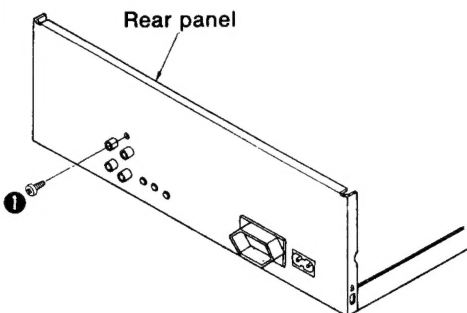
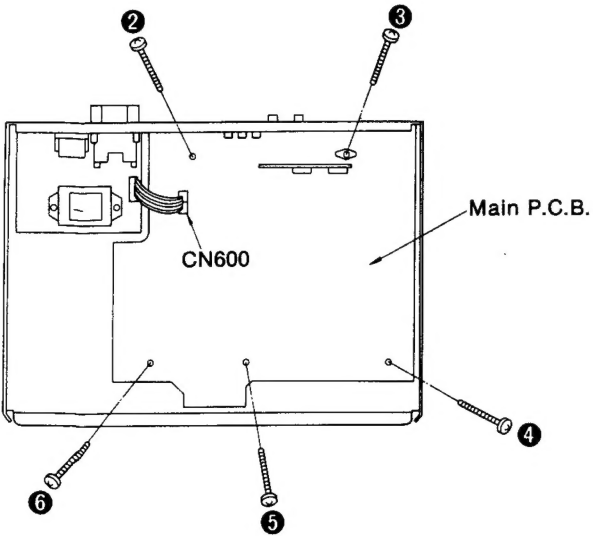
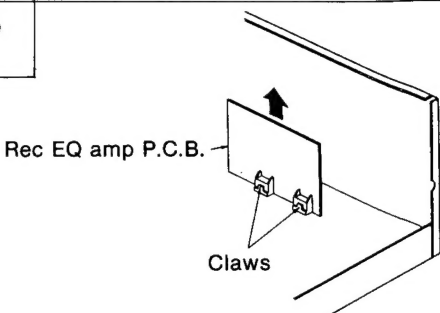


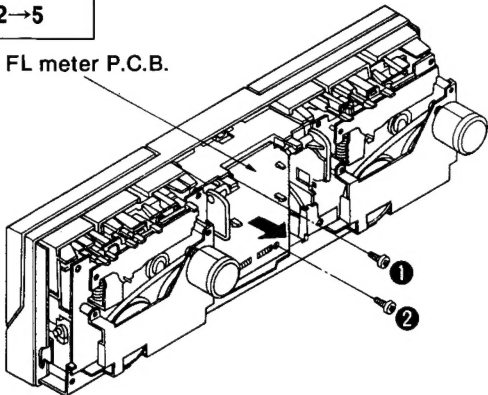
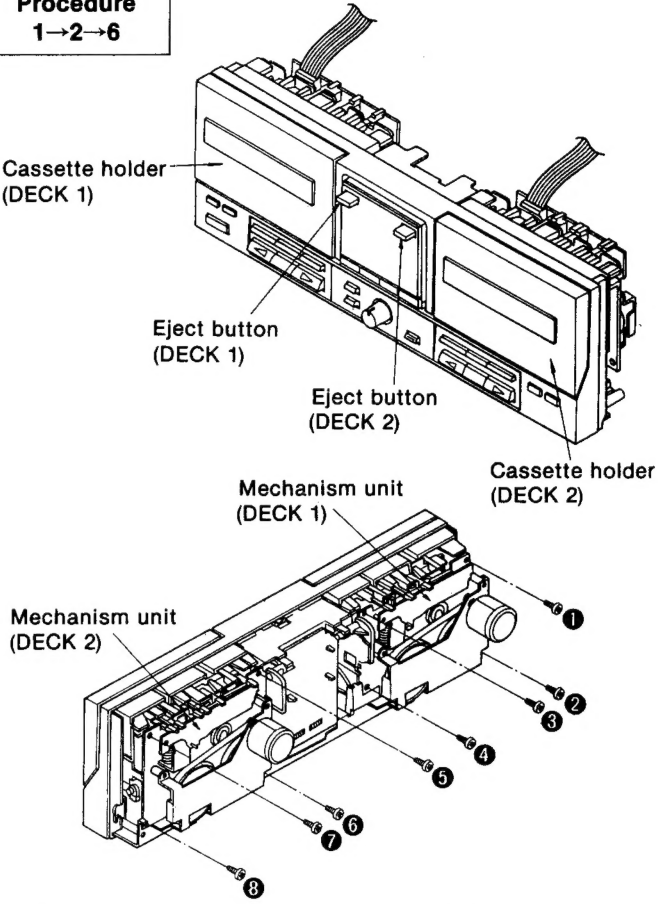
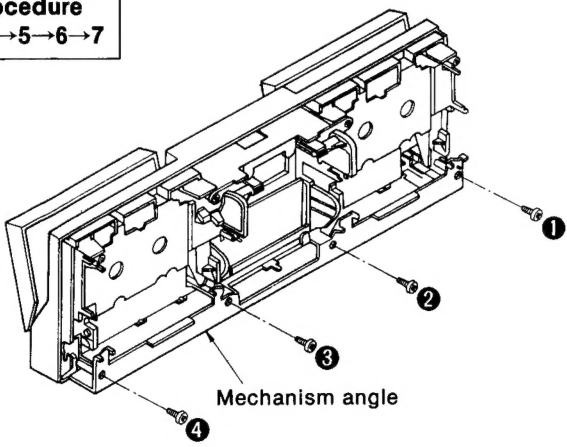
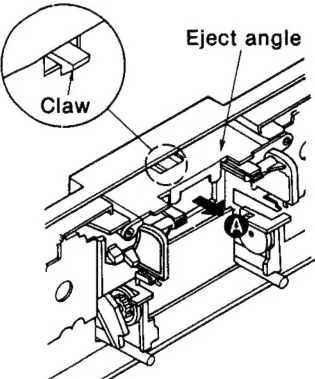
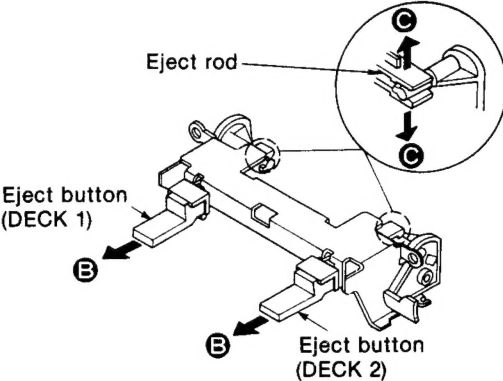
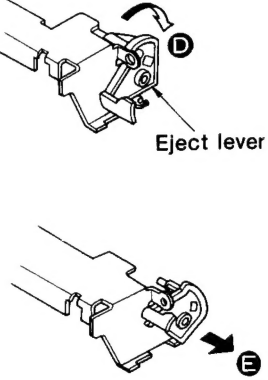
- A Tape counter**
Indicates the amount of tape movement (separately for tape deck 1 and tape deck 2).
- B Reverse-side indicator (◁)**
Illuminates during playback or recording to indicate that side "B" of the tape is being used.
- C Recording indicator (REC)**
This indicator illuminates to indicate that this tape deck is in the recording stand-by mode, or is recording.
- D Remote-control indicator (DECK 1 REMOTE, DECK 2 REMOTE)**
This indicator illuminates to indicate that this tape deck can now be controlled by the remote-control transmitter (included with tuner).
- E Playback indicator (PLAY)**
When this indicator illuminates steadily, it indicates that this tape deck is in the playback mode or the recording mode. When it flashes continually, this is an indication that this tape deck is in the pause mode or the recording stand-by mode. When it flashes rapidly, this is an indication that this tape deck is in the search mode.
- F Forward-side indicator (▷)**
Illuminates during playback or recording to indicate that side "A" of the tape is being used.

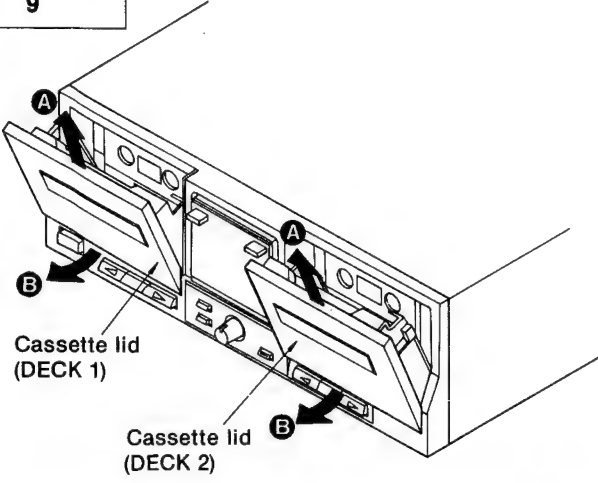
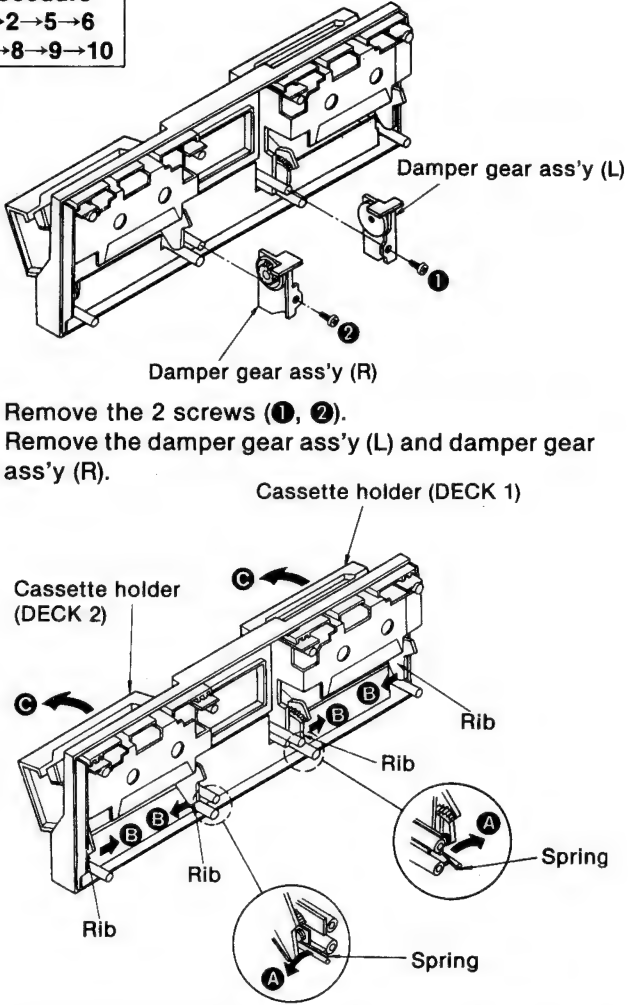
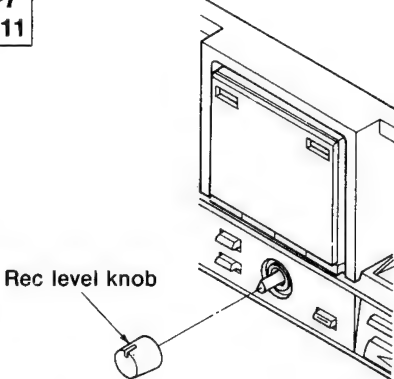
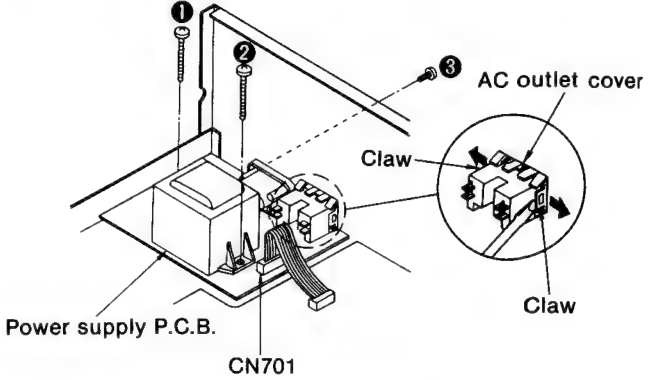
DISASSEMBLY INSTRUCTIONS

“ATTENTION SERVICER”

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

| | | | |
|---------------------------|--|-------------------------|---|
| Ref. No. 1 | Removal of the cabinet | Ref. No. 2 | Removal of the front panel ass'y |
| Procedure 1 |  <p>• Remove the 6 screws (①~⑥).</p> | Procedure 1→2 |  <p>1. Remove the 4 screws (①~④).</p>  <p>2. Remove the 4 connectors (CP1, CP2, CP17, CP18). 3. Remove the 5 flat cables (CN3, CN4, CN5, CN6, CN8). 4. Remove the front panel ass'y in the direction of arrow.</p> <p>How to remove the flat cable</p> <p>• Pull out the flat cable while pressing the connector. (CN3, CN5, CN8)</p> <p>1. Lift the connector. 2. Pull out the flat cable. (CN4, CN6)</p>   |
| Ref. No. 3 | Removal of the main P.C.B. | | |
| Procedure 1→2→3 |  <p>1. Remove the 1 screw (①).</p>  <p>2. Remove the 5 screws (②~⑥). 3. Remove the 1 flat cable (CN600).</p> | Ref. No. 4 | Removal of the rec EQ amp P.C.B. |
| | | Procedure 1→4 |  <p>• Release the 2 claws and then remove the rec EQ amp P.C.B. in the direction of arrow.</p> |

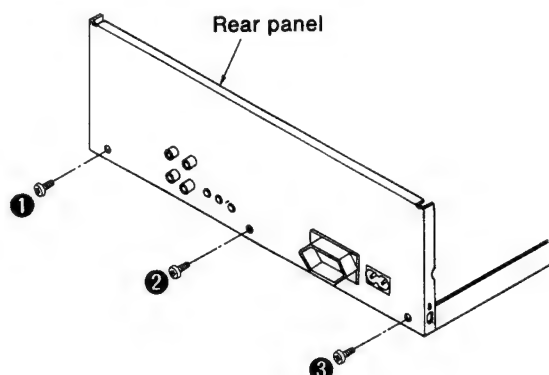
| Ref. No. 5 | Removal of the FL meter P.C.B. | Ref. No. 6 | Removal of the mechanism units (DECK 1, DECK 2) |
|------------------------|---|--|--|
| Procedure 1→2→5 |  <p>FL meter P.C.B.</p> <ol style="list-style-type: none"> 1. Remove the 2 screws (①, ②). 2. Remove the FL meter P.C.B. in the direction of arrow. | Procedure 1→2→6 |  <p>Cassette holder (DECK 1)</p> <p>Eject button (DECK 1)</p> <p>Eject button (DECK 2)</p> <p>Cassette holder (DECK 2)</p> <p>Mechanism unit (DECK 1)</p> <p>Mechanism unit (DECK 2)</p> <p>① ② ③ ④ ⑤ ⑥ ⑦ ⑧</p> <p>■ Removal of the mechanism unit (DECK 1)</p> <ol style="list-style-type: none"> 1. Press the eject button and open the cassette holder. 2. Remove the 4 screws (①~④). <p>■ Removal of the mechanism unit (DECK 2)</p> <ol style="list-style-type: none"> 1. Press the eject button and open the cassette holder. 2. Remove the 4 screws (⑤~⑧). |
| Ref. No. 7 | Removal of the mechanism angle | | |
| Procedure 1→2→5→6→7 |  <p>Mechanism angle</p> <p>① ② ③ ④</p> <p>• Remove the 4 screws (①~④).</p> | | |
| Ref. No. 8 | Removal of the eject angle, eject buttons, and eject lever | | |
| Procedure 1→2→5→6→8 |  <p>Eject angle</p> <p>Claw</p> <ol style="list-style-type: none"> 1. Release the 1 claw. 2. Pull out the eject angle in the direction of arrow ➊. |  <p>Eject rod</p> <p>Eject button (DECK 1)</p> <p>Eject button (DECK 2)</p> <ol style="list-style-type: none"> 3. Pull out the claw of the eject rod in the direction of arrow ➋, remove the eject buttons and the eject rod in the direction of arrow ➌. |  <p>Eject lever</p> <ol style="list-style-type: none"> 4. Turn the eject lever in the direction of arrow ➍, and remove the eject lever in the direction of arrow ➎. |

| Ref. No. 9 | Removal of the cassette lid (DECK 1, DECK 2) | Ref. No. 10 | Removal of the cassette holder (DECK 1, DECK 2) |
|--------------------------------------|---|-----------------------------------|--|
| Procedure 9 |  <p>Cassette lid (DECK 1)</p> <p>Cassette lid (DECK 2)</p> <ul style="list-style-type: none"> Lift the cassette lid in the direction of arrow A and remove it in the direction of arrow B. | Procedure 1→2→5→6 →7→8→9→10 |  <p>Damper gear ass'y (L)</p> <p>Damper gear ass'y (R)</p> <ol style="list-style-type: none"> Remove the 2 screws (1, 2). Remove the damper gear ass'y (L) and damper gear ass'y (R). <p>Cassette holder (DECK 1)</p> <p>Cassette holder (DECK 2)</p> <p>Rib</p> <p>Rib</p> <p>Rib</p> <p>Rib</p> <p>Spring</p> <p>Spring</p> <ol style="list-style-type: none"> Remove the springs in the direction of arrow A. Remove the ribs in the direction of arrow B. Remove the cassette holder in the direction of arrow C. |
| Ref. No. 11 | Removal of the operation P.C.B. | Ref. No. 12 | Removal of the power supply P.C.B. |
| Procedure 1→2→5→6→7 →8→9→10→11 |  <p>Rec level knob</p> <p>Operation P.C.B.</p> <p>Claw</p> <p>Claws</p> <p>Claw</p> <p>Claws</p> <p>Claws</p> <ol style="list-style-type: none"> Remove the rec level knob. Remove the 4 screws (1~4). Release the 14 claws. | Procedure 1→12 |  <p>AC outlet cover</p> <p>Claw</p> <p>Claw</p> <p>Power supply P.C.B.</p> <p>CN701</p> <ol style="list-style-type: none"> Remove the 1 flat cable (CN701). Remove the 3 screws (1~3). Release the 2 claws of the AC outlet cover. |

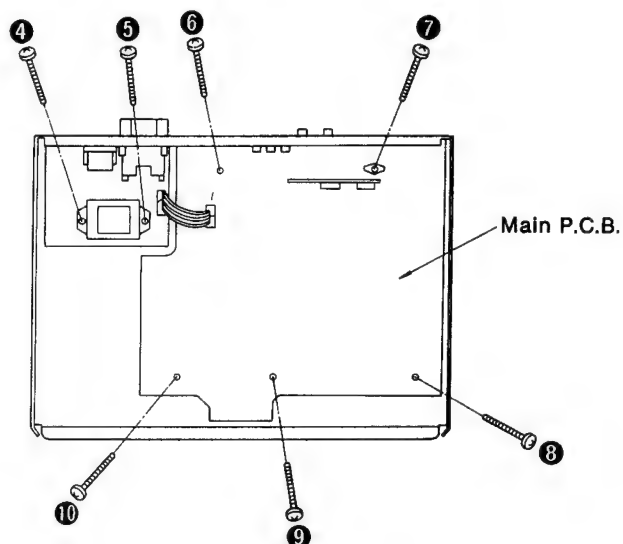
Ref. No.
13

How to check the main P.C.B.

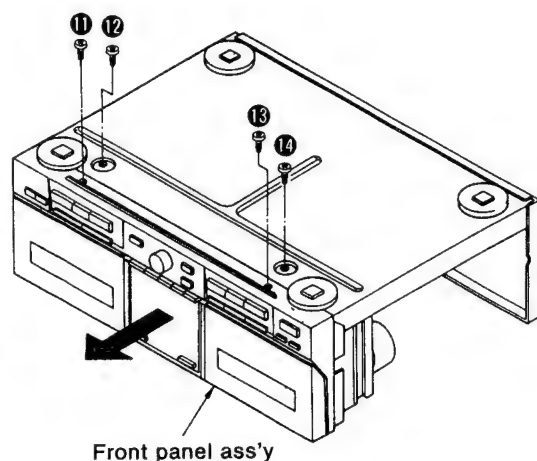
Procedure
1→13



1. Remove the 3 screws (①~③).

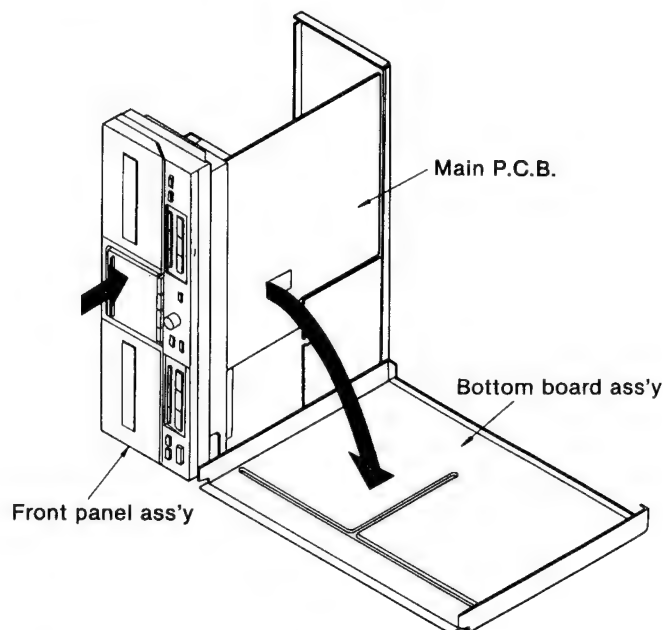


2. Remove the 7 screws (④~⑩).



3. Remove the 4 screws (⑪~⑭).

4. Remove the front panel ass'y in the direction of arrow.



5. Remove the bottom board ass'y.

6. Reinstall the front panel ass'y to the main P.C.B.

MEASUREMENTS AND ADJUSTMENTS

Measurement Condition

- Rec. level control; Maximum
- Reverse-mode selector switch; \longleftrightarrow
- Tape-to-tape recording tape-speed selector; X1
- Dolby NR selector switch; Off

- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

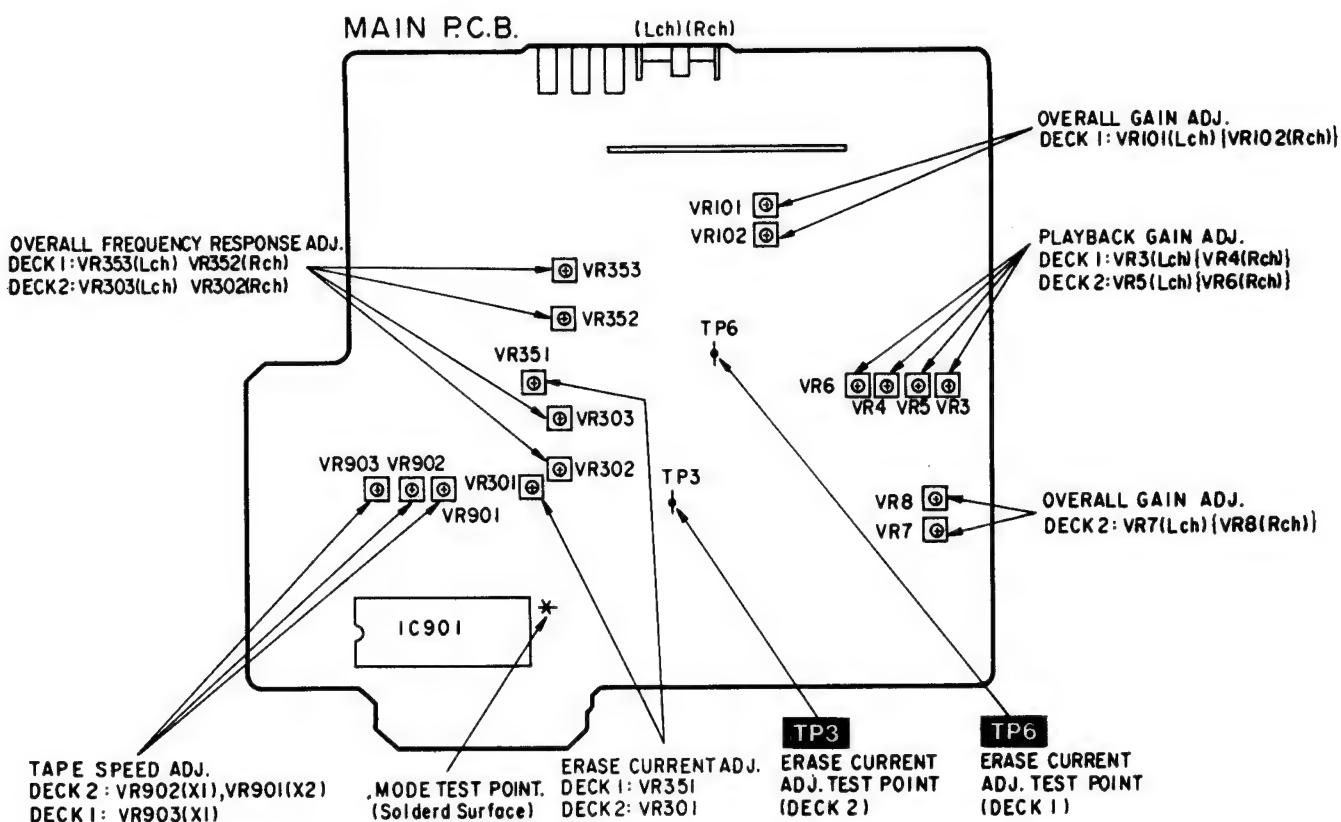
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB); QZZCFM

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
Normal reference blank tape; QZZCRA
CrO₂ reference blank tape; QZZCRX
Metal reference blank tape; QZZCRZ

Adjustment Points



HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

1. Playback the azimuth adjustment portion (8kHz, -20dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-CH and R-CH are maximized and the lissajous waveform, as illustrated, approaches 0 degrees.

Note: If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

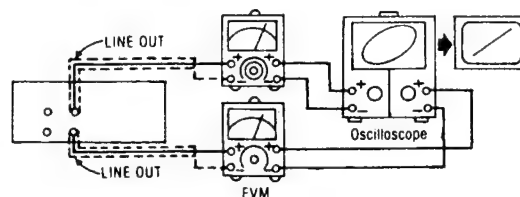


Fig. 1

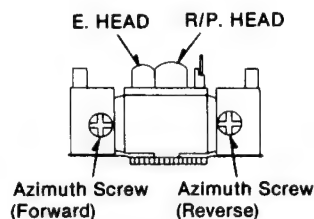


Fig. 2

TAPE SPEED ADJUSTMENT (DECK 1/2)**Normal speed**

1. Shift the Tape-to-tape recording tape-speed selector to "X1" and press the synchro-start button.
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust Deck 1=VR903 and Deck 2=VR902 so that the output is within the standard value.

High speed

4. Shift the Tape-to-tape recording tape-speed switch to "X2" and press the synchro-start button.
5. Playback the middle portion of the test tape (QZZCWAT).
6. Adjust Deck 2=VR901 so that the output is within the standard value.

Note: The Normal speed adjustment must be done before the High speed adjustment.

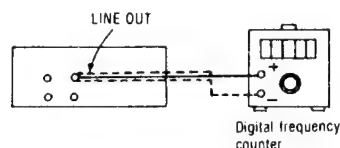


Fig. 3

(DECK 1) Standard value: 3000 ± 15 Hz [Normal (X1)], 6000 ± 600 Hz [High (X2), only confirmation]

(DECK 2) Standard value: 3000 ± 15 Hz [Normal (X1)], 6000 ± 30 Hz [High (X2)]

PLAYBACK GAIN ADJUSTMENT (DECK 1/2)

1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust Deck 1=VR3 (L-CH) [[VR4 (R-CH)]] and Deck 2=VR5 (L-CH) [[VR6 (R-CH)]] so that the output is within the standard value.

Standard value: $0.4V \pm 0.5dB$

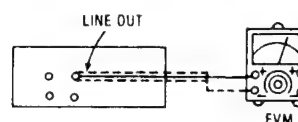


Fig. 4

PLAYBACK FREQUENCY RESPONSE (DECK 1/2)

1. Playback the frequency response portion (315Hz, 12.5kHz~63Hz, -20dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in Fig. 6 for both L-CH and R-CH.

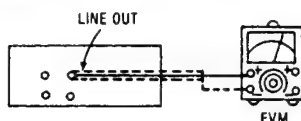


Fig. 5

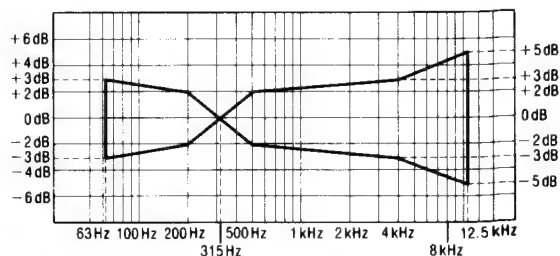


Fig. 6

ERASE CURRENT ADJUSTMENT (DECK 1/2)

1. Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record Pause mode.
2. Adjust Deck 1=VR351 (Deck 2=VR301) so that the output between Deck 1=TP6 (Deck 2=TP3) and GND is within the standard value.

Standard value: $190 \pm 5 \text{ mA}$ (Metal)...EVM Reading: $190 \pm 5 \text{ mV}$

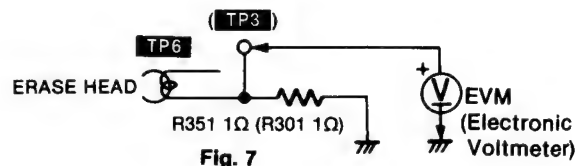


Fig. 7

OVERALL FREQUENCY RESPONSE (DECK 1/2)

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1 kHz, -24 dB) through an attenuator.
3. Attenuate the signal by 20 dB and adjust the frequency from 50 Hz ~ 10 kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in Fig. 8 in comparison to the reference frequency (1 kHz).
6. If it is not within the standard range, adjust Deck 1=VR353 (Deck 2=VR303) (L-CH) and Deck 1=VR352 (Deck 2=VR302) (R-CH) so that the frequency level is within the standard range.
 - Level up in high frequency rangeIncrease the bias current.
 - Level down in high frequency range ...Decrease the bias current.
7. Repeat steps 2~6 above using the CrO₂ tape (QZZCRX) and the Metal tape (QZZCRZ) increasing the frequency range to 12.5 kHz (50 Hz ~ 12.5 kHz).
8. Assure that the level is within the range shown in Fig. 9.

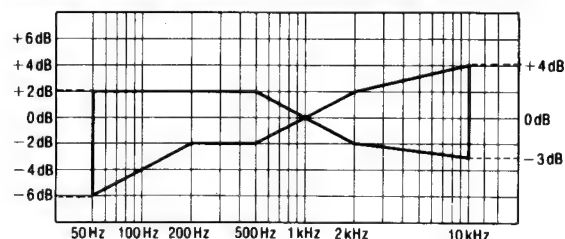
Normal Overall frequency response chart (NR OUT)

Fig. 8

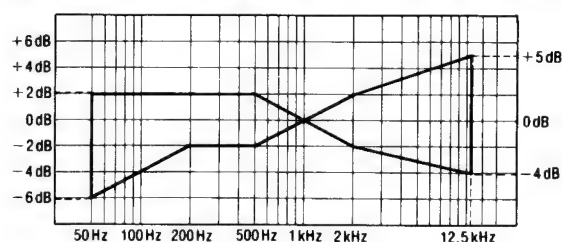
CrO₂ Metal Overall frequency response chart (NR OUT)

Fig. 9

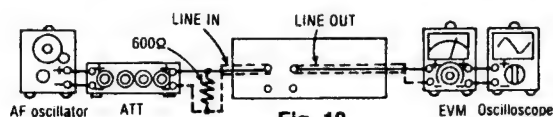


Fig. 10

OVERALL GAIN ADJUSTMENT (DECK 1/2)

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1 kHz, -24 dB). Attenuate the output so that its level becomes 0.4 V.
3. Record this input signal.
4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
5. If it is not within the standard value, adjust Deck 1=VR101 (Deck 2=VR7) (L-CH) and Deck 1=VR102 (Deck 2=VR8) (R-CH).
6. Repeat the step 2~5 above until the output is within the standard value.

Standard value: $0.4 \text{ V} \pm 0.5 \text{ dB}$

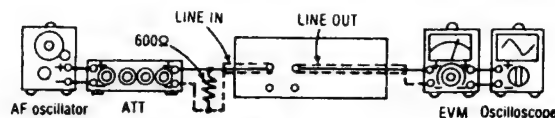
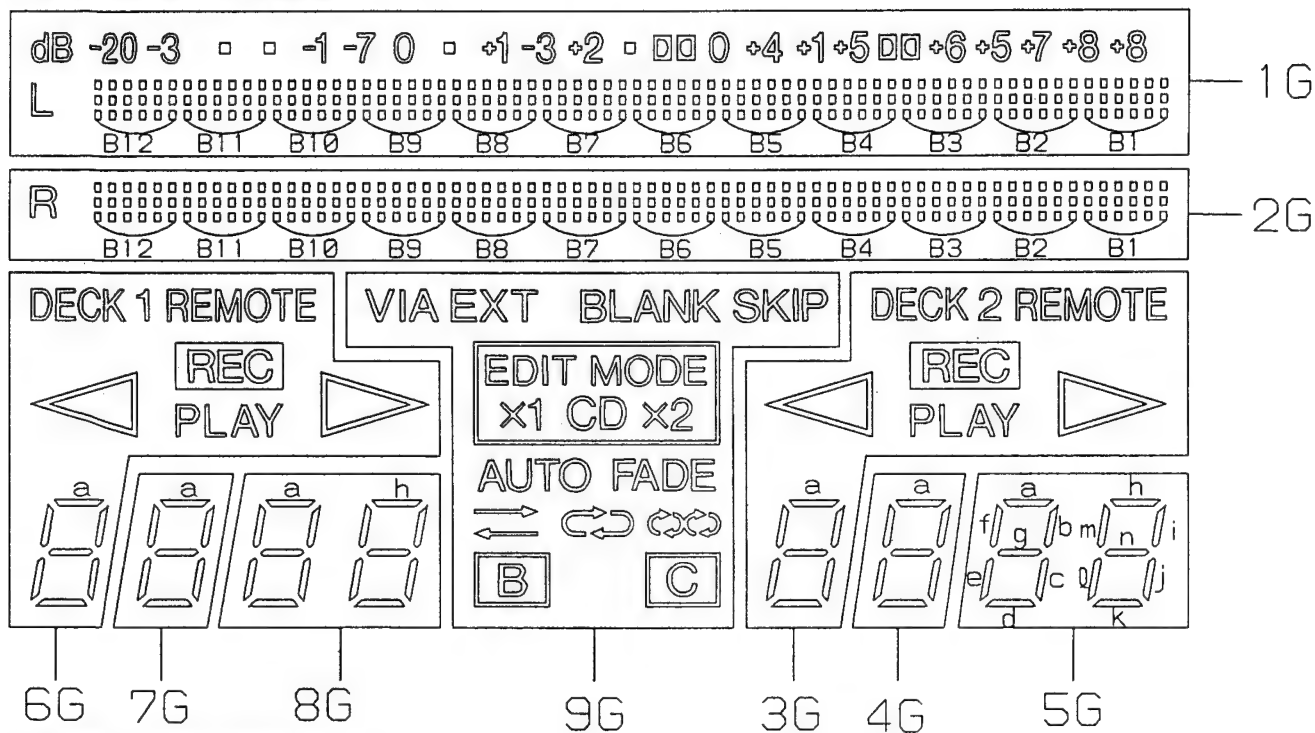


Fig. 11

INTERNAL CONNECTION OF FL

• Grid connection diagram



• Anode connection table

| | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|-----|------------|----|----|---------------|----|----|---------------|-----|------|
| P1 | ↔ | n | - | ▷ | n | - | ▷ | B1 | B1 |
| P2 | ↔ | j | - | PLAY | j | - | PLAY | B2 | B2 |
| P3 | ↔ | l | - | ◁ | l | - | ◁ | B3 | B3 |
| P4 | EDIT MODE | k | - | DECK 1 REMOTE | k | - | DECK 2 REMOTE | B4 | B4 |
| P5 | CD | h | - | REC | h | - | REC | B5 | B5 |
| P6 | x2 | a | a | a | a | a | a | B6 | B6 |
| P7 | x1 | b | b | b | b | b | b | B7 | B7 |
| P8 | - | f | f | f | f | f | f | B8 | B8 |
| P9 | B | g | g | g | g | g | g | B9 | B9 |
| P10 | C | c | c | c | c | c | c | B10 | B10 |
| P11 | VIA EXT | e | e | e | e | e | e | B11 | B11 |
| P12 | BLANK SKIP | d | d | d | d | d | d | B12 | B12 |
| P13 | - | i | - | - | i | - | - | - | S1 |
| P14 | - | m | - | - | m | - | - | - | S2 |
| P15 | - | - | - | - | - | - | - | R | L dB |
| P16 | AUTO FADE | - | - | - | - | - | - | - | - |

• Pin connection

| PIN NO. | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|------------|----|----|----|----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| CONNECTION | F2 | F2 | NP | NP | P15 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 | P4 | P3 | P2 | P1 | P16 | P14 | P13 | C | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | NP | NP | F1 | F1 |

Note

1) F1, F2Filament
2) NPNo pin

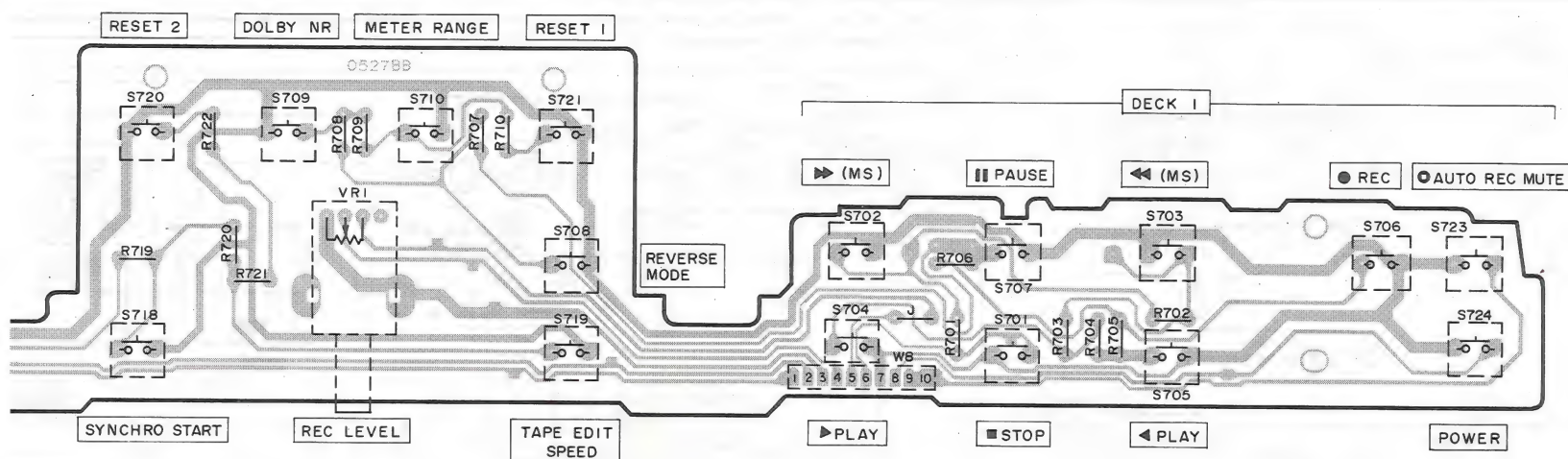
3) NCNo connection
4) 1G~9GGrid

DECK 2

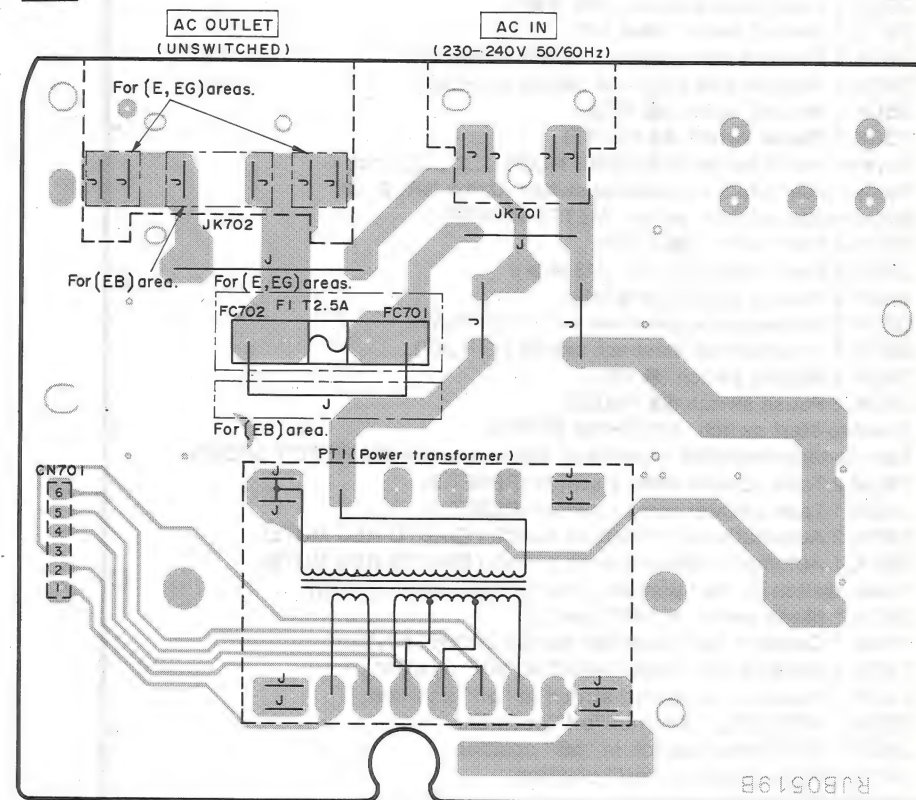
● REC ● AUTO REC MUTE ► (MS) || PAUSE

S716 S722 S712 R718 S717 R714 R713 S714 S711 R715 R716 R717

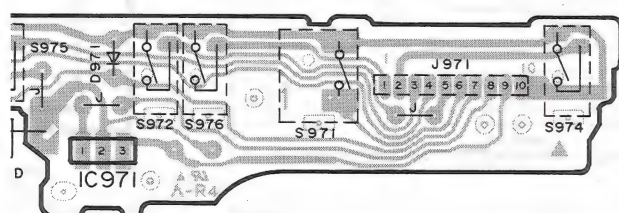
► PLAY ■ STOP



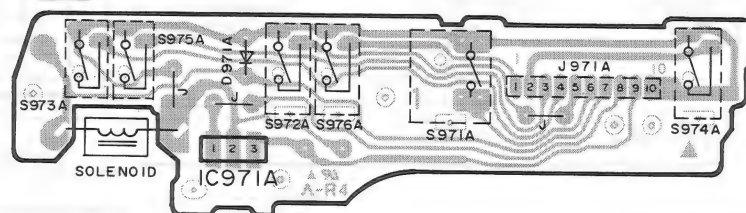
B POWER SUPPLY P.C.B.



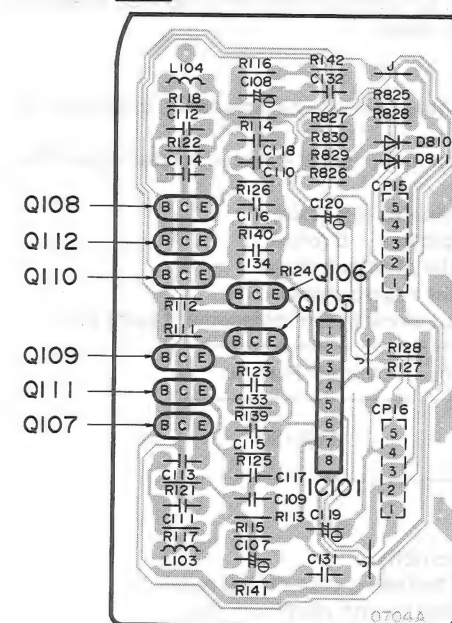
MECHANISM (DECK 1) P.C.B.



E MECHANISM (DECK 2) P.C.B.



C REC EQ AMP P.C.B.



SCHEMATIC DIAGRAM (Parts list on pages 32~36.)

(This schematic diagram may be modified at any time with development of new technology.)

Notes:

- S701: DECK 1 Stop switch (■ STOP).
- S702: DECK 1 Fast-forward switch (MS ►►).
- S703: DECK 1 Rewind switch (◄◄ MS).
- S704: DECK 1 Forward-side playback switch (▷ PLAY).
- S705: DECK 1 Reverse-side playback switch (◁ PLAY).
- S706: DECK 1 Record switch (● REC).
- S707: DECK 1 Pause switch (■ PAUSE).
- S708: Reverse mode switch (REVERSE MODE; ►, ◄, ○).
- S709: Dolby noise-reduction selector switch (Dolby NR; B, C).
- S710: Meter-range selector switch (METER RANGE).
- S711: DECK 2 Stop switch (■ STOP).
- S712: DECK 2 Fast-forward switch (MS ►►).
- S713: DECK 2 Rewind switch (◄◄ MS).
- S714: DECK 2 Forward-side playback switch (▷ PLAY).
- S715: DECK 2 Reverse-side playback switch (◁ PLAY).
- S716: DECK 2 Record switch (● REC).
- S717: DECK 2 Pause switch (■ PAUSE).
- S718: Synchro-start switch (SYNCHRO START).
- S719: Tape-to-tape recording tape-speed selector switch (TAPE EDIT SPEED).
- S720: DECK 2 Tape counter reset 2 switch (RESET 2).
- S721: DECK 1 Tape counter reset 1 switch (RESET 1).
- S722: DECK 2 Automatic-record-muting switch (● AUTO REC MUTE).
- S723: DECK 1 Automatic-record-muting switch (● AUTO REC MUTE).
- S724: Power switch in "on" position (POWER, STANDBY ◻/ON).
- S971: DECK 1 Mode switch in "off" position.
- S972: DECK 1 Cassette half detection switch in "off" position.
- S973: DECK 1 Reverse rec. inhibit switch in "off" position.
- S974: DECK 1 Forward rec. inhibit switch in "off" position.
- S975: DECK 1 ATS (CrO₂) switch in "off" position.
- S976: DECK 1 ATS (Metal) switch in "off" position.
- S971A: DECK 2 Mode switch in "off" position.
- S972A: DECK 2 Cassette half detection switch in "off" position.
- S973A: DECK 2 Reverse rec. inhibit switch in "off" position.
- S974A: DECK 2 Forward rec. inhibit switch in "off" position.
- S975A: DECK 2 ATS (CrO₂) switch in "off" position.
- S976A: DECK 2 ATS (Metal) switch in "off" position.

Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)

Capacity are in micro-farads (μF) unless specified otherwise.

All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.

().....Voltage values at record mode.

For measurement us EVM.

Important safety notice

Components identified by Δ mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

- (——— +B ———) indicates +B (bias).
- (——— -B ———) indicates -B (bias).
- (———) indicates the flow of the playback signal.
- (———) indicates the flow of the record signal.
- The supply part number is described alone in the replacement parts list.

| Ref. No. | Production Part No. | Supply Part No. |
|--------------------|---------------------|-----------------|
| IC7, 101, 552, 802 | M5218AL | M5218L |

* Caution!

IC and LSI are sensitive to static electricity.

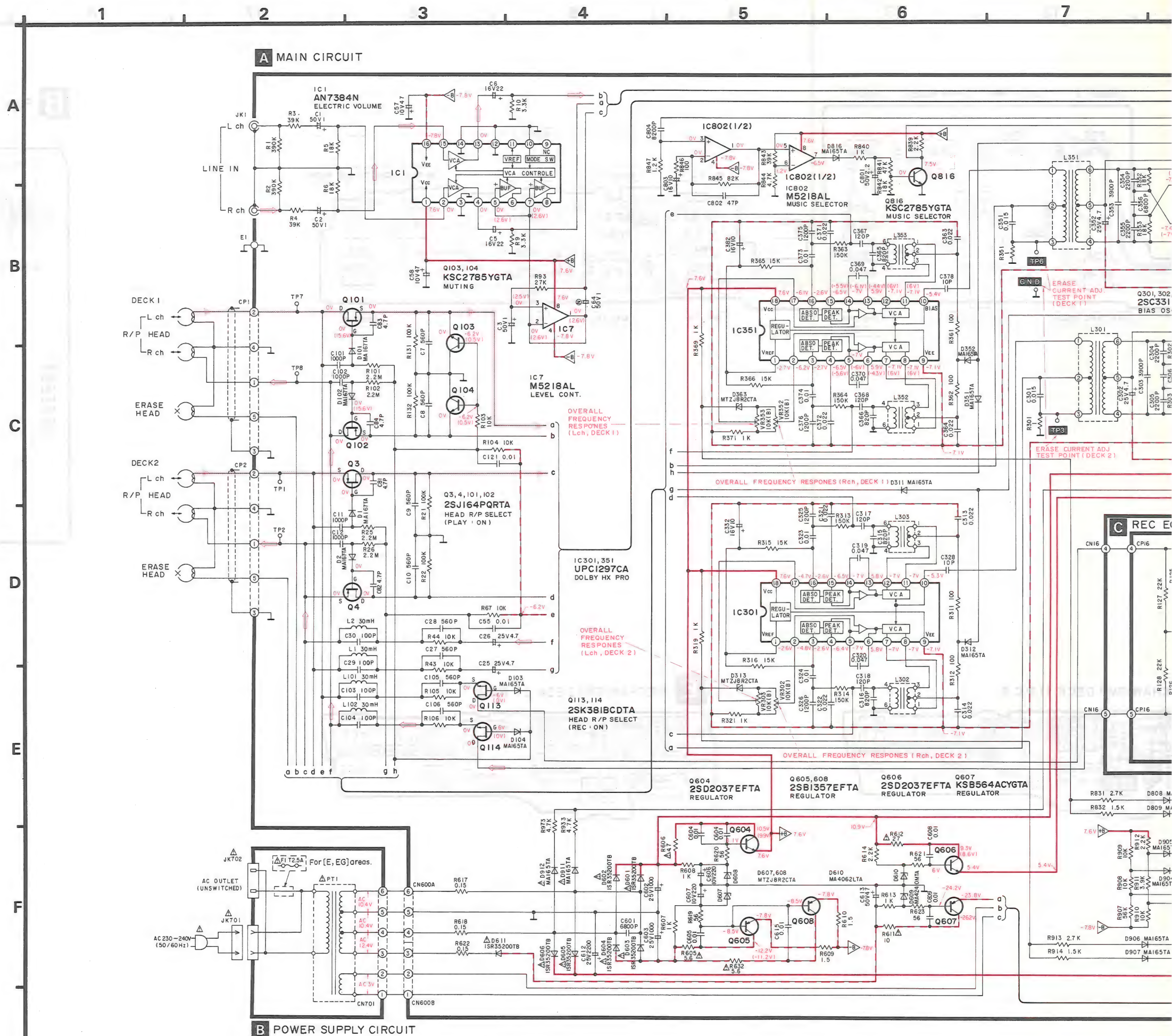
Secondary trouble can be prevented by taking care during repair.

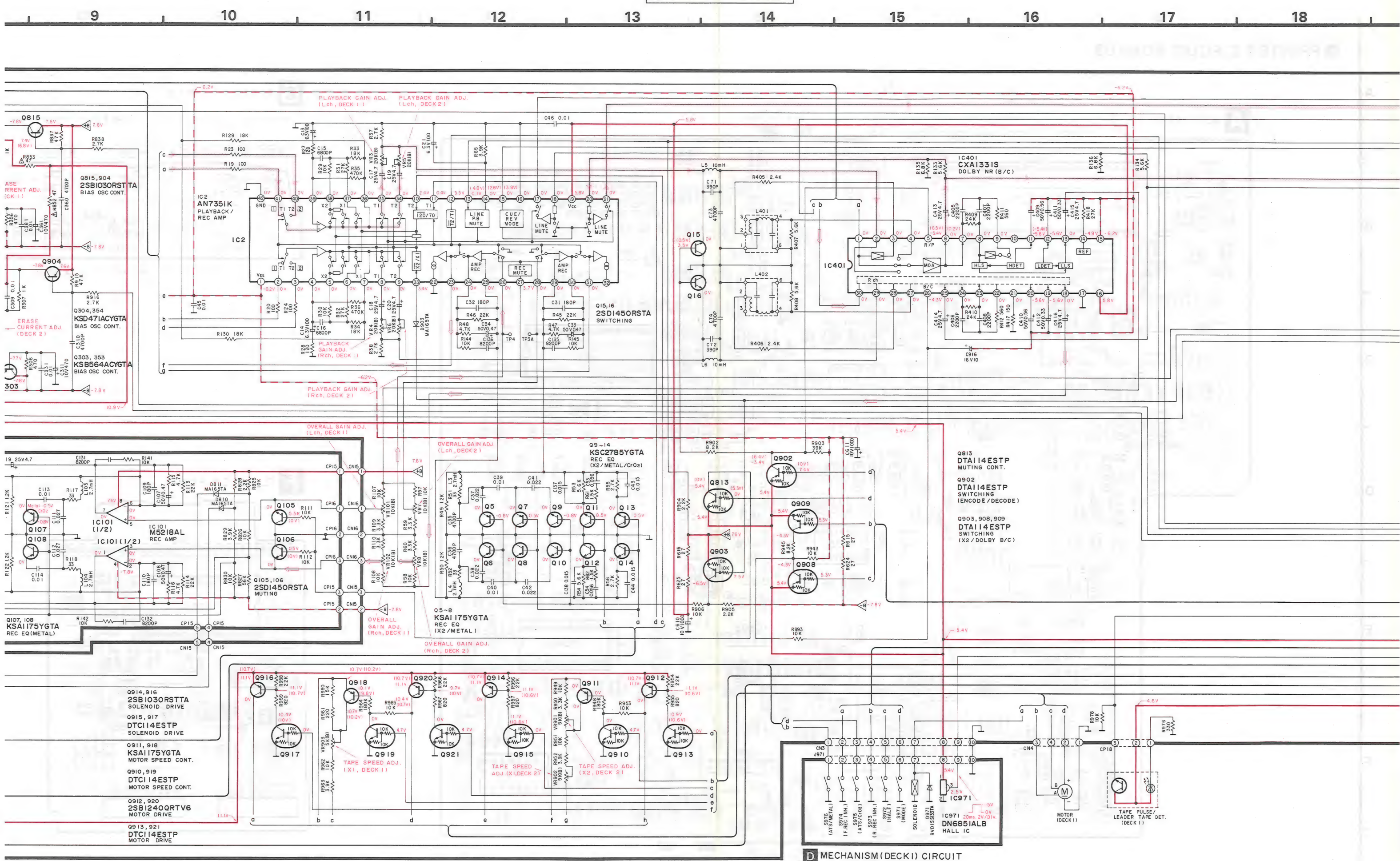
* Cover the parts boxes made of plastics with aluminum foil.

* Ground the soldering iron.

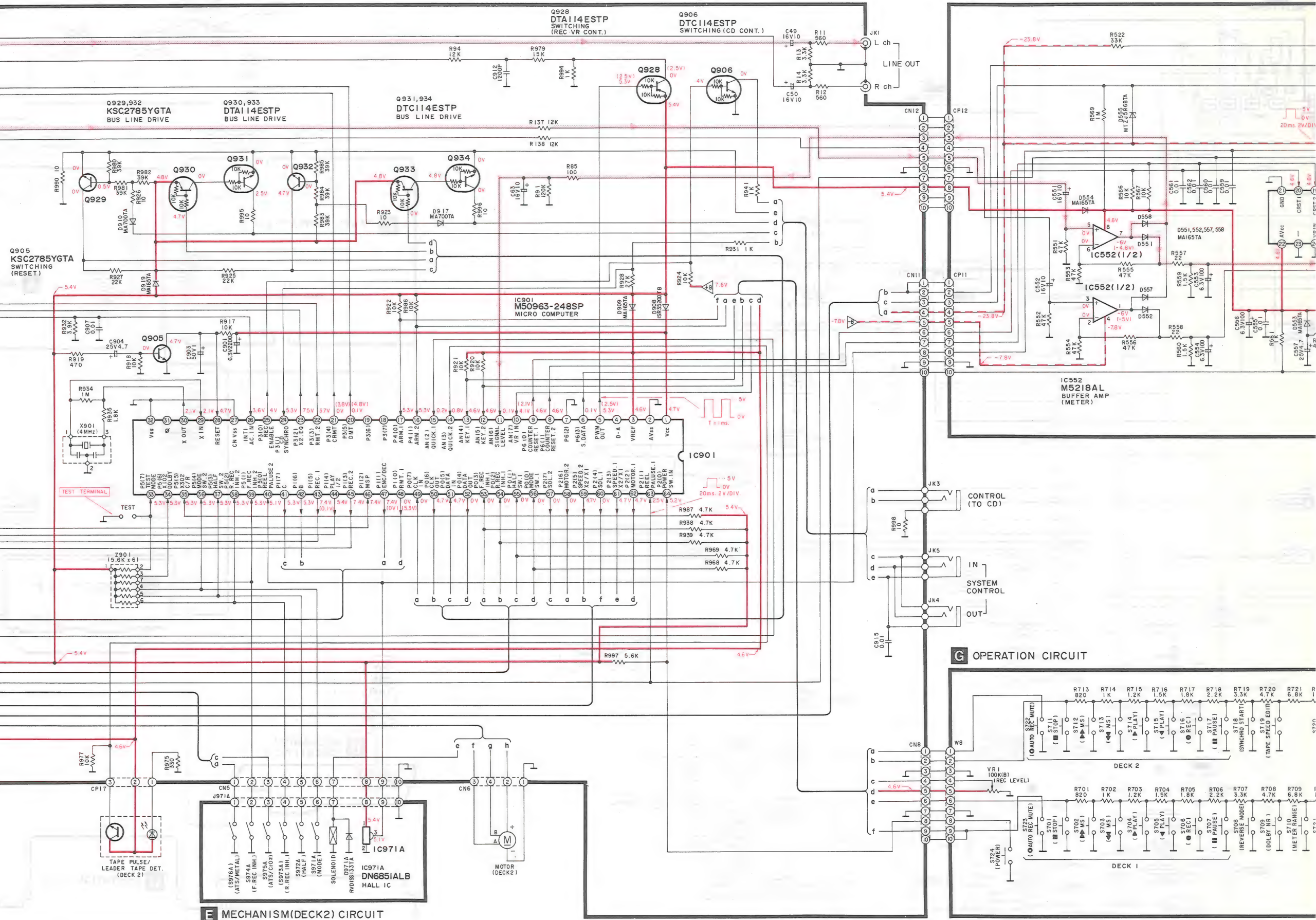
* Put a conductive mat on the work table.

* Do not touch the legs of IC or LSI with the fingers directly.





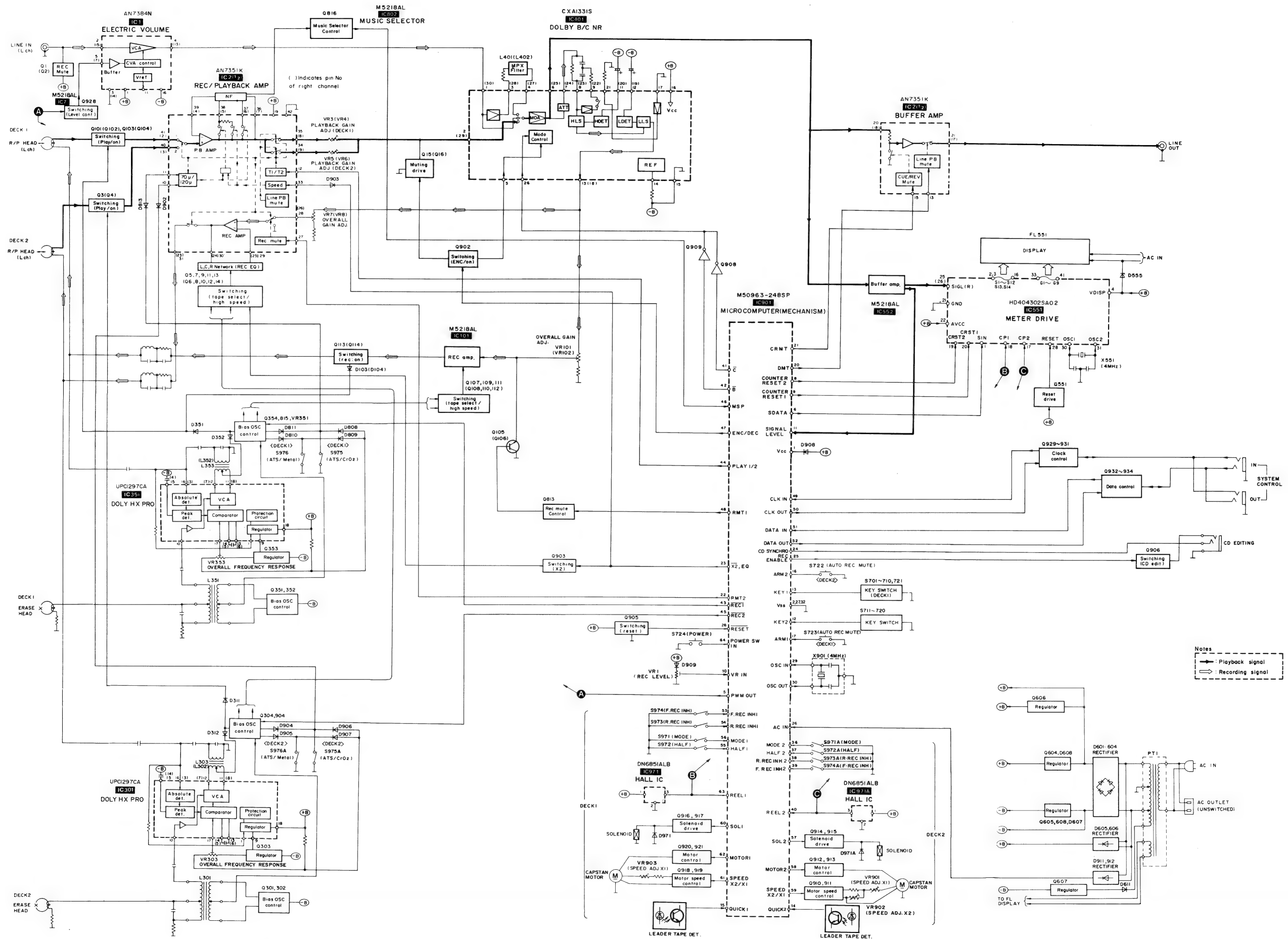
D MECHANISM (DECK I) CIRCUIT



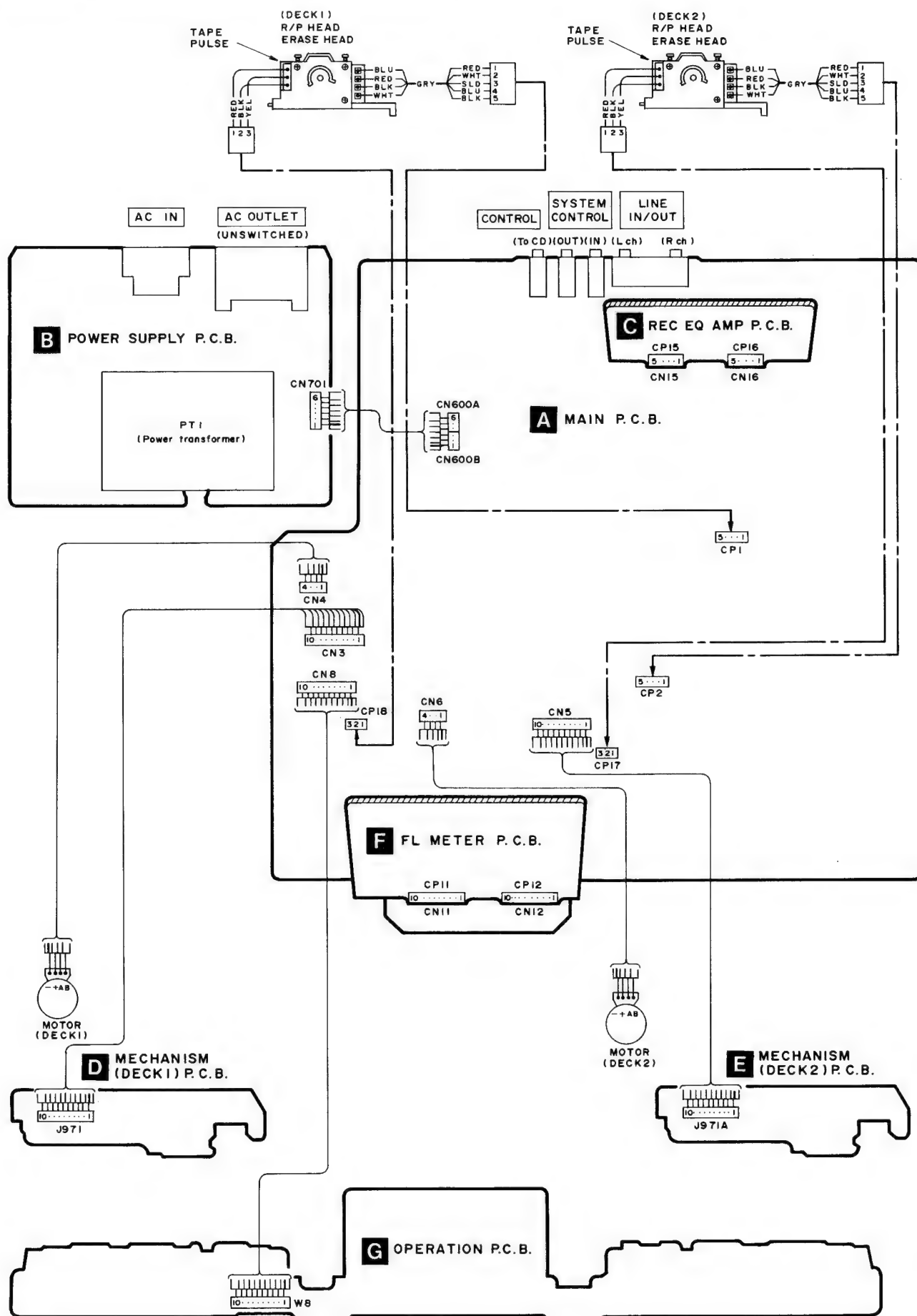
MECHANISM(DECK2) CIRCUIT

G OPERATION CIRCUIT

BLOCK DIAGRAM



WIRING CONNECTION DIAGRAM



■ TERMINAL FUNCTION OF IC'S

- IC901 (M50963-248SP): MICROCOMPUTER (This microcomputer is used for mechanical operation.)

| Pin No. | Mark | I/O Division | Function | Pin No. | Mark | I/O Division | Function |
|---------|------------------------|--------------|--|---------|-------------------|--------------|---|
| 1 | V _{CC} | I | Power supply terminal | 23 | P3 (2) | O | Playback equalizer select signal with tape edit of deck 1 (Normal: "H", X2 edit: "L") |
| 2 | AV _{SS} (GND) | — | GND terminal | 24 | P3 (1) | I | CD Synchro rec. signal (CD STOP: "H", CD PLAY: "L") |
| 3 | V _{REF} | I | Reference voltage terminal | 25 | P3 (0) | O | CD Synchro rec. possible/impossible signal (possible: "L", impossible: "H") |
| 4 | D-A | — | Not used, open | 26 | INTI | I | "AC POWER OFF" det. terminal |
| 5 | PWM | O | Pulse width modulated signal | 27 | CNV _{SS} | — | GND terminal |
| 6 | P6 (3) | O | Serial signal for FL display | 28 | RESET | I | Reset signal ("L"=RESET, Normal: "H") |
| 7 | P6 (2) | — | Not used, open | 29 | X _{IN} | I | Clock OSC terminal |
| 8 | P6 (1) | O | Counter reset signal of deck 2 ("RESET": "L", others: "H") | 30 | X _{OUT} | O | |
| 9 | P6 (0) | O | Counter reset signal of deck 1 ("RESET": "L", others: "H") | 31 | φ | — | Not used, open |
| 10 | AN (7) | I | Variable voltage level signal of rec. level volume | 32 | V _{SS} | — | GND terminal |
| 11 | AN (6) | I | Peak voltage terminal of rec. signal | 33 | P5 (7) | I | Test terminal (Normal="H") |
| 12 | AN (5) | I | Operation key switches Deck 2: STOP, F.F./REW, PLAY, REC, PAUSE, SYNCHRO START, X1/X2, counter reset | 34 | P5 (6) | I | Model select (Normal: "H") |
| 13 | AN (4) | I | Operation key switches Deck 1: STOP, F.F./REW, F. PLAY, R. PLAY, REC, PAUSE, Reverse-mode, Dolby B/C, Meter-range, counter reset | 35 | P5 (5) | I | Model select (Normal: "H") |
| 14 | AN (3) | I | Leader tape det. signal of deck 2 | 36 | P5 (4) | I | Mechanism mode switch ("ON": "L", "OFF": "H") |
| 15 | AN (2) | I | Leader tape det. signal of deck 1 | 37 | P5 (3) | I | Cassette half det. switch ("ON": "L", "OFF": "H") |
| 16 | P4 (1) | I | "AUTO REC MUTE" key switch signal of deck 2 ("ON": "L", "OFF": "H") | 38 | P5 (2) | I | Reverse rec. inh. switch of deck 2 ("ON": "L", "OFF": "H") |
| 17 | P4 (0) | I | "AUTO REC MUTE" key switch signal of deck 1 ("ON": "L", "OFF": "H") | 39 | P5 (1) | I | Forward rec. inh. switch of deck 2 ("ON": "L", "OFF": "H") |
| 18 | P3 (7) | — | Not used | 40 | P5 (0) | I | Reel rotation pulse signal of deck 2 |
| 19 | P3 (6) | — | Not used | 41 | P1 (7) | O | Dolby C "ON/OFF" select signal ("ON": "L", "OFF": "H") |
| 20 | P3 (5) | O | Mute signal of line out (Mute "ON": "H", Mute "OFF": "L") | 42 | P1 (6) | O | Dolby B "ON/OFF" select signal ("ON": "L", "OFF": "H") |
| 21 | P3 (4) | O | Mute signal with Cue/Review action (Mute "ON": "H", Mute "OFF": "L") | 43 | P1 (5) | O | Bias OSC "ON/OFF" select signal ("ON": "L", "OFF": "H") |
| 22 | P3 (3) | O | Rec. mute signal of deck 2 (Mute "ON": "H", Mute "OFF": "L") | 44 | P1 (4) | O | Playback amp. select signal (Deck 2-P.B: "L", others: "H") |
| | | | | 45 | P1 (3) | O | Bias OSC "ON/OFF" select signal ("ON": "L", "OFF": "H") |
| | | | | 46 | P1 (2) | I | Playback signal det. output signal ("ON": "L", "OFF": "H") |

| Pin No. | Mark | I/O Division | Function |
|---------|--------|--------------|--|
| 47 | P1 (1) | O | Dolby circuit encord/decord select signal (encord: "L", decord: "H") |
| 48 | P1 (0) | O | Rec. mute signal of deck 2 (Mute "ON": "H", Mute "OFF": "L") |
| 49 | P0 (7) | I | Bus clock signal |
| 50 | P0 (6) | O | |
| 51 | P0 (5) | I | Bus data signal |
| 52 | P0 (4) | O | |
| 53 | P0 (3) | I | Forward rec. inh. switch of deck 1 ("ON": "L", "OFF": "H") |
| 54 | P0 (2) | I | Reverse rec. inh. switch of deck 1 ("ON": "L", "OFF": "H") |
| 55 | P0 (1) | I | Cassette-half det. switch of deck 1 ("ON": "L", "OFF": "H") |
| 56 | P0 (0) | I | Mechanism mode-switch of deck 1 ("ON": "L", "OFF": "H") |
| 57 | P2 (7) | O | Mechanism plunger "ON/OFF" select signal of deck 2 ("ON": "H", "OFF": "L") |

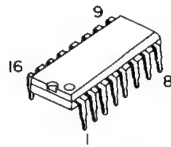
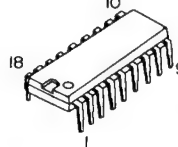
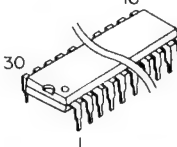
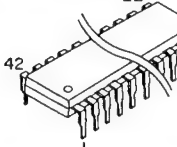
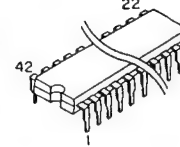
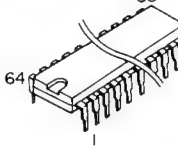
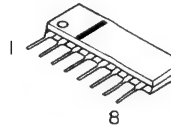
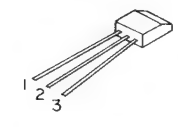
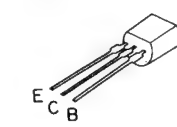
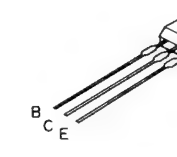
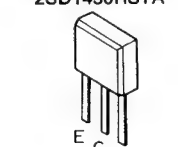
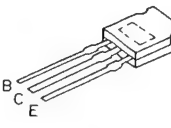
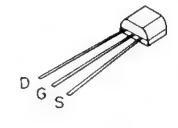
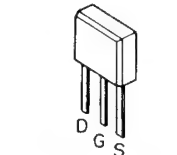
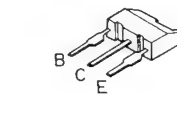
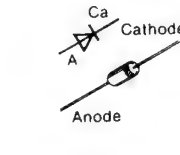
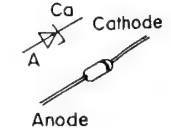
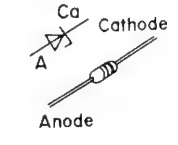
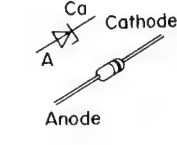
| Pin No. | Mark | I/O Division | Function |
|---------|--------|--------------|--|
| 58 | P2 (6) | O | Mechanism motor "ON/OFF" select signal of deck 2 ("ON": "H", "OFF": "L") |
| 59 | P2 (5) | O | Mechanism motor speed select signal of deck 2 ("X1": "H", "X2": "L") |
| 60 | P2 (4) | O | Mechanism plunger "ON/OFF" select signal of deck 1 ("ON": "H", "OFF": "L") |
| 61 | P2 (3) | O | Mechanism motor speed select signal of deck 1 ("X1": "H", "X2": "L") |
| 62 | P2 (2) | O | Mechanism motor "ON/OFF" select signal of deck 1 ("ON": "H", "OFF": "L") |
| 63 | P2 (1) | I | Mechanism reel rotation pulse signal of deck 1 |
| 64 | P2 (0) | I | Power switch ("ON": "L", "OFF": "H") |

• IC551 (HD404302SA02): MICROCOMPUTER (This microcomputer is used for FL meter operation.)

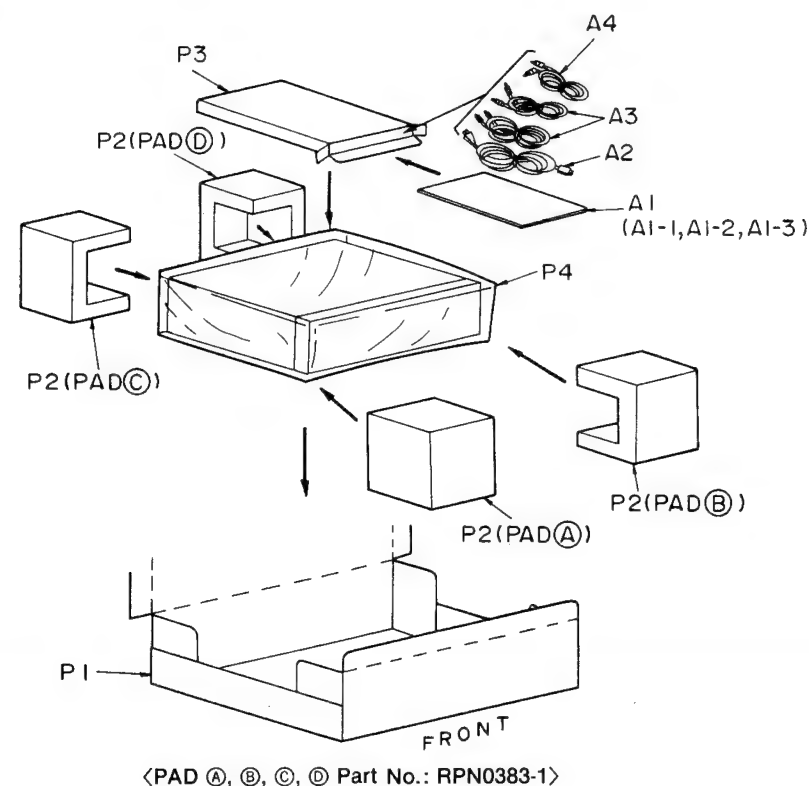
| Pin No. | Mark | I/O Division | Function |
|----------------------------------|----------------|--------------|---|
| 1 | SIN | I | Serial data signal |
| 2 • 3 • 5 • 16 | S1 } S14 | O | Segment signal for FL display |
| 4 | V disp | I | Pull down power supply terminal ($-V_{CC}$) |
| 17 | CP2 | I | Peel pulse signal of deck 2 |
| 18 | CP1 | | |
| 19 | CRST2 | I | Tape counter reset terminal of deck 2 |
| 20 | CRST1 | I | Tape counter reset terminal of deck 1 |
| 21 | GND | — | GND terminal |
| 22 | AVCC | I | Power supply terminal |

| Pin No. | Mark | I/O Division | Function |
|---------------|--------------------------|--------------|-------------------------------|
| 23 | — | — | — |
| 24 | VRIN | — | Rec level control signal |
| 25 | SIGL | I | Lch level signal |
| 26 | SIGR | I | Rch level signal |
| 27 | AVSS | — | GND terminal |
| 28 | RESET | I | Reset terminal ("RESET": "H") |
| 29 | $\overline{\text{TEST}}$ | I | Test terminal |
| 30 | OSC1 | O | Clock OSC terminal (4MHz) |
| 31 | OSC2 | I | |
| 32 | VCC | I | Power supply terminal |
| 33 • 41 | G1 } G9 | O | Grid signal for FL display |
| 42 | PWM | — | Not used, open |

■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

| | | | | | |
|---|---|---|---|--|--|
| AN7384N  | UPC1297CA  | CXA1331S  | HD404302SA02  | AN7351K  | M50963-248SP  |
| M5218AL  | DN6851ALB  | KSB564ACYGTA KSD471ACYGTA  |  KSA1175YGTA KSC2785YGTA 2SC3311AQSTA DTA114ESTP DTC114ESTP | | 2SB1030RSTTA 2SD1450RSTA  |
| 2SB1357EFTA 2SD2037EFTA  | 2SK381BCDTA  | 2SJ164PQRTA  | 2SB1240QRTV6  |  MA165TA MA167TA MA700TA 1SR35200TB RVD1SS133TA | |
| MTZJ5R6BTA MTZJ8R2CTA  | MA4062LTA  | MA4240MTA  | | | |

■ PACKING



■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks column specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|-----------|--------------|---------------------------|---------|-----------|-------------|-------------------------|----------|
| | | INTEGRATED CIRCUIT(S) | | Q906 | DTC114ESTP | TRANSISTOR | |
| | | | | Q908, 909 | DTA114ESTP | TRANSISTOR | |
| | | | | Q910 | DTC114ESTP | TRANSISTOR | |
| IC1 | AN7384N | ELECTRIC VOLUME | | Q911 | KSA1175YGTA | TRANSISTOR | |
| IC2 | AN7351K | PLAYBACK/REC AMP | | Q912 | 2SB1240-P | TRANSISTOR | |
| IC7 | M5218L | REC LEVEL CONTROL (DECK2) | | Q913 | DTC114ESTP | TRANSISTOR | |
| IC101 | M5218L | REC LEVEL CONTROL (DECK1) | | Q914 | 2SB1030QTA | TRANSISTOR | |
| IC301 | UPC1297CA | DOLBY HX PRO (DECK2) | | Q915 | DTC114ESTP | TRANSISTOR | |
| IC351 | UPC1297CA | DOLBY HX PRO (DECK1) | | Q916 | 2SB1030QTA | TRANSISTOR | |
| IC401 | CXA1331S | DOLBY B/C NR | | Q917 | DTC114ESTP | TRANSISTOR | |
| IC551 | HD404302SA02 | MICROCOMPUTER; FL METER | | Q918 | KSA1175YGTA | TRANSISTOR | |
| IC552 | M5218L | BUFFER AMP | | Q919 | DTC114ESTP | TRANSISTOR | |
| IC802 | M5218L | MUSIC SELECTOR AMP | | Q920 | 2SB1240-P | TRANSISTOR | |
| IC901 | M50963-248SP | MICROCOMPUTER; MECHANICAL | | Q921 | DTC114ESTP | TRANSISTOR | |
| IC971 | DN6851ALB | HALL (DECK1) | | Q928 | DTA114ESTP | TRANSISTOR | |
| IC971A | DN6851ALB | HALL (DECK2) | | Q929 | KSC2785YGTA | TRANSISTOR | |
| | | TRANSISTOR(S) | | Q930 | DTA114ESTP | TRANSISTOR | |
| | | | | Q931 | DTC114ESTP | TRANSISTOR | |
| | | | | Q932 | KSC2785YGTA | TRANSISTOR | |
| Q3, 4 | 2SJ164PQRTA | TRANSISTOR | | Q933 | DTA114ESTP | TRANSISTOR | |
| Q5-8 | KSA1175YGTA | TRANSISTOR | | Q934 | DTC114ESTP | TRANSISTOR | |
| Q9-14 | KSC2785YGTA | TRANSISTOR | | | | | |
| Q15, 16 | 2SD1450RSTA | TRANSISTOR | | | | DIODE(S) | |
| Q101, 102 | 2SJ164PQRTA | TRANSISTOR | | | | | |
| Q103, 104 | KSC2785YGTA | TRANSISTOR | | D1, 2 | MA167 | DIODE | |
| Q105, 106 | 2SD1450RSTA | TRANSISTOR | | D101, 102 | MA167 | DIODE | |
| Q107, 108 | KSA1175YGTA | TRANSISTOR | | D103, 104 | MA165 | DIODE | |
| Q109-112 | KSC2785YGTA | TRANSISTOR | | D311, 312 | MA165 | DIODE | |
| Q113, 114 | 2SK381BCDTA | TRANSISTOR | | D313 | MTZJ8R2CTA | DIODE | |
| Q301, 302 | 2SC3311A-Q | TRANSISTOR | | D351, 352 | MA165 | DIODE | |
| Q303 | KSB564ACYGTA | TRANSISTOR | | D363 | MTZJ8R2CTA | DIODE | |
| Q304 | KSD471ACYGTA | TRANSISTOR | | D551-554 | MA165 | DIODE | |
| Q351, 352 | 2SC3311A-Q | TRANSISTOR | | D555 | MTZJ5R6BTA | DIODE | |
| Q353 | KSB564ACYGTA | TRANSISTOR | | D557, 558 | MA165 | DIODE | |
| Q354 | KSD471ACYGTA | TRANSISTOR | | D601-606 | 1SR35200TB | DIODE | Δ |
| Q551 | KSA1175YGTA | TRANSISTOR | | D607, 608 | MTZJ8R2CTA | DIODE | |
| Q604 | 2SD2037EFTA | TRANSISTOR | | D609 | MA4240H | DIODE | |
| Q605 | 2SB1357EFTA | TRANSISTOR | | D610 | MA4062 | DIODE | |
| Q606 | 2SD2037EFTA | TRANSISTOR | | D611 | 1SR35200TB | DIODE | Δ |
| Q607 | KSB564ACYGTA | TRANSISTOR | | D808-811 | MA165 | DIODE | |
| Q608 | 2SB1357EFTA | TRANSISTOR | | D813 | MA165 | DIODE | |
| Q813 | DTA114ESTP | TRANSISTOR | | D816 | MA165 | DIODE | |
| Q815 | 2SB1030QTA | TRANSISTOR | | D902-907 | MA165 | DIODE | |
| Q816 | KSC2785YGTA | TRANSISTOR | | D908 | 1SR35200TB | DIODE | |
| Q902, 903 | DTA114ESTP | TRANSISTOR | | D909 | MA165 | DIODE | |
| Q904 | 2SB1030QTA | TRANSISTOR | | D910 | MA700TA | DIODE | |
| Q905 | KSC2785YGTA | TRANSISTOR | | D911, 912 | MA165 | DIODE | Δ |

| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|------------|--------------|----------------------------|---------|----------|--------------|------------------------------|---------|
| D917 | MA700TA | DIODE | | | | | |
| D919 | MA165 | DIODE | | S701 | EVQ21405R | STOP (DECK1) | |
| D971 | RVD1SS133TA | DIODE (DECK1) | | S702 | EVQ21405R | F. F. (DECK1) | |
| D971A | RVD1SS133TA | DIODE (DECK2) | | S703 | EVQ21405R | REW. (DECK1) | |
| | | | | S704 | EVQ21405R | F. PLAYBACK (DECK1) | |
| | | VARIABLE RESISTOR(S) | | S705 | EVQ21405R | R. PLAYBACK (DECK1) | |
| | | | | S706 | EVQ21405R | REC (DECK1) | |
| VR1 | EVJ02FF01B15 | REC LEVEL CONTROL | | S707 | EVQ21405R | PAUSE (DECK1) | |
| VR3-6 | EVNDXAA00B24 | PLAYBACK GAIN ADJ. | | S708 | EVQ21405R | REVERSE MODE | |
| VR7, 8 | EVNDXAA00B14 | OVERALL GAIN ADJ. (DECK2) | | S709 | EVQ21405R | DOLBY NR | |
| VR101, 102 | EVNDXAA00B14 | OVERALL GAIN ADJ. (DECK1) | | S710 | EVQ21405R | METER RANGE | |
| VR301 | EVNDXAA00B14 | ERASE CURRENT ADJ. (DECK2) | | S711 | EVQ21405R | STOP (DECK2) | |
| VR302, 303 | EVNDXAA00B14 | OVERALL FREQ. ADJ. (DECK2) | | S712 | EVQ21405R | F. F. (DECK2) | |
| VR351 | EVNDXAA00B14 | ERASE CURRENT ADJ. (DECK1) | | S713 | EVQ21405R | REW. (DECK2) | |
| VR352, 353 | EVNDXAA00B14 | OVERALL FREQ. ADJ. (DECK1) | | S714 | EVQ21405R | F. PLAYBACK (DECK2) | |
| VR901-903 | EVNDXAA00B53 | TAPE SPEED ADJ. | | S715 | EVQ21405R | R. PLAYBACK (DECK2) | |
| | | | | S716 | EVQ21405R | REC (DECK2) | |
| | | COMPONENT COMBINATION(S) | | S717 | EVQ21405R | PAUSE (DECK2) | |
| | | | | S718 | EVQ21405R | SYNCHRO START | |
| Z901 | EXBF7E562JYV | COMBINATION PART (5. 6kx6) | | S719 | EVQ21405R | TAPE EDIT SPEED (X1/X2) | |
| | | | | S720 | EVQ21405R | COUNTER RESET2 (DECK2) | |
| | | COIL (S) | | S721 | EVQ21405R | COUNTER RESET1 (DECK1) | |
| | | | | S722 | EVQ21405R | AUTO REC MUTE (DECK2) | |
| L1, 2 | SLQX303-1KT | COIL | | S723 | EVQ21405R | AUTO REC MUTE (DECK1) | |
| L3, 4 | SLQX272-1YT | COIL | | S724 | EVQ21405R | POWER | |
| L5, 6 | RLQB103JT-Y | COIL | | S971 | RSH1A89ZB-U | MODE (DECK1) | |
| L101, 102 | SLQX303-1KT | COIL | | S972 | RSH1A90YB-U | HALF (DECK1) | |
| L103, 104 | SLQX272-1YT | COIL | | S973 | RSH1A90YB-U | R. REC INH (DECK1) | |
| L301 | SL09M-K | COIL | | S974 | RSH1A90YB-U | F. REC INH (DECK1) | |
| L302, 303 | SL09M-Z | COIL | | S975 | RSH1A90YB-U | ATS (DECK1) | |
| L351 | SL09M-K | COIL | | S976 | RSH1A90YB-U | ATS (DECK1) | |
| L352, 353 | SL09M-Z | COIL | | S971A | RSH1A89ZB-U | MODE (DECK2) | |
| L401, 402 | QLM9210K | COIL | | S972A | RSH1A90YB-U | HALF (DECK2) | |
| | | | | S973A | RSH1A90YB-U | R. REC INH (DECK2) | |
| | | TRANSFORMER (S) | | S974A | RSH1A90YB-U | F. REC INH (DECK2) | |
| | | | | S975A | RSH1A90YB-U | ATS (DECK2) | |
| PT1 | RTP1MB013 | POWER TRANSFORMER | △ | S976A | RSH1A90YB-U | ATS (DECK2) | |
| | | | | | | | |
| | | OSCILLATOR(S) | | | | CONNECTOR (S) AND SOCKET (S) | |
| | | | | | | | |
| X551 | EFOG4004A4 | CERAMIC FILTER (4MHz) | | CN3 | SJSD1005 | CONNECTOR (10P) | |
| X901 | EFOG4004A4 | CERAMIC FILTER (4MHz) | | CN4 | RJS1A1704 | CONNECTOR (4P) | |
| | | | | CN5 | SJSD1005 | CONNECTOR (10P) | |
| | | DISPLAY TUBE | | CN6 | RJS1A1704 | CONNECTOR (4P) | |
| | | | | CN8 | SJSD1005 | CONNECTOR (10P) | |
| FL551 | RSLO27-1F | DISPLAY TUBE | | CN11, 12 | RJU003K010M1 | SOCKET (10P) | |
| | | | | CN15, 16 | RJU060G05T | SOCKET (5P) | |
| | | FUSE (S) | | CN600A | RJS1A1703 | CONNECTOR (3P) | |
| | | | | CN600B | RJS1A1703 | CONNECTOR (3P) | |
| F1 | XBA225TB0 | FUSE 250V T2. 5A | △ | CN701 | SJT30643-V | CONNECTOR (6P) | |
| | | | | CP1, 2 | RJP5G18ZA | CONNECTOR (5P) | |
| | | SWITCH (ES) | | CP11, 12 | RJT003K010M1 | CONNECTOR (10P) | |

| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-------------|-------------------------|-----------|------------|--------------|-------------------------|---------|
| CP15, 16 | RJT060R05 | CONNECTOR (5P) | | | | | |
| CP17, 18 | SJTD313 | CONNECTOR (3P) | | | | FUSE HOLDER (S) | |
| | | | | | | | |
| | | JACK (S) | | FC701, 702 | EYF52BC | FUSE HOLDER | |
| | | | | | | | |
| | | | | | | FLAT CABLE (S) | |
| JK1 | SJF3069-2N | TERMINAL BOARD | | | | | |
| JK3-5 | RJJ33T01 | M3 JACK | | | | | |
| JK701 | SJS9236 | AC INLET | △ | W3 | RWJ0210200QQ | FLAT CABLE (10P) | |
| JK702 | RJS1A4802-B | AC OUTLET | (EB) △ | W4 | RWJ1804200QQ | FLAT CABLE (4P) | |
| JK702 | RJS1A4902-B | AC OUTLET | (E, EG) △ | W5 | RWJ0210200QQ | FLAT CABLE (10P) | |
| | | | | W6 | RWJ1804200QQ | FLAT CABLE (4P) | |
| | | GND PART (S) | | W8 | RWJ0210200KQ | FLAT CABLE (10P) | |
| | | | | W600 | RWJ1806120QQ | FLAT CABLE (6P) | |
| E1 | SNE1004-1 | GND PLATE | | | | | |

RESISTORS & CAPACITORS

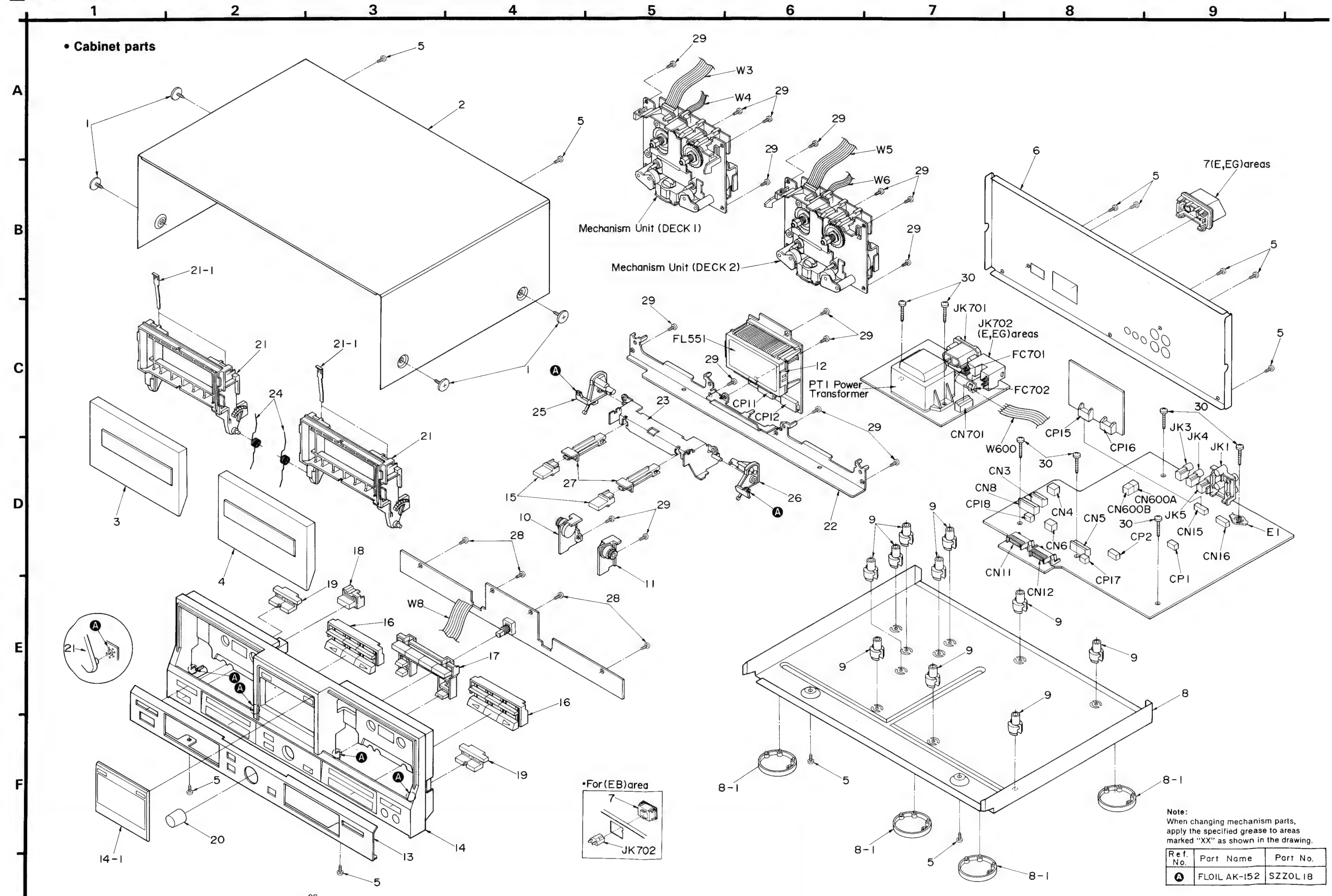
Notes : * Capacity value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

| Ref. No. | Part No. | Values & Remarks | Ref. No. | Part No. | Values & Remarks | Ref. No. | Part No. | Values & Remarks |
|----------|-------------|------------------|-----------|-------------|------------------|-----------|-------------|------------------|
| | | | R61, 62 | ERDS2TJ152 | 1/4W 1. 5K | R304, 305 | ERDS2TJ100 | 1/4W 10 |
| | | RESISTORS | R65 | ERDS2TJ392T | 1/4W 3. 9K | R306 | ERDS2TJ471 | 1/4W 470 |
| | | | R67 | ERDS2TJ103 | 1/4W 10K | R307 | ERDS2TJ102 | 1/4W 1K |
| R1, 2 | ERDS2TJ394 | 1/4W 390K | R85 | ERDS2TJ101 | 1/4W 100 | R311, 312 | ERDS2TJ101 | 1/4W 100 |
| R3, 4 | ERDS2TJ393 | 1/4W 39K | R91 | ERDS2TJ124T | 1/4W 120K | R313, 314 | ERDS2TJ154 | 1/4W 150K |
| R5, 6 | ERDS2TJ183T | 1/4W 18K | R93 | ERDS2TJ273 | 1/4W 27K | R315, 316 | ERDS2TJ153 | 1/4W 15K |
| R9, 10 | ERDS2TJ332 | 1/4W 3. 3K | R94 | ERDS2TJ123 | 1/4W 12K | R319 | ERDS2TJ102 | 1/4W 1K |
| R11, 12 | ERDS2TJ561 | 1/4W 560 | R101, 102 | ERDS2TJ225 | 1/4W 2. 2M | R321 | ERDS2TJ102 | 1/4W 1K |
| R13, 14 | ERDS2TJ332 | 1/4W 3. 3K | R103-108 | ERDS2TJ103 | 1/4W 10K | R329 | ERDS2TJ102 | 1/4W 1K |
| R19, 20 | ERDS2TJ101 | 1/4W 100 | R109, 110 | ERDS2TJ332 | 1/4W 3. 3K | R351 | ERDS2TJ1R0 | 1/4W 1. 0 |
| R21, 22 | ERDS2TJ104 | 1/4W 100K | R111, 112 | ERDS2TJ103 | 1/4W 10K | R352, 353 | ERDS2TJ183T | 1/4W 18K |
| R23, 24 | ERDS2TJ101 | 1/4W 100 | R113, 114 | ERDS2TJ223 | 1/4W 22K | R354, 355 | ERDS2TJ100 | 1/4W 10 |
| R25, 26 | ERDS2TJ225 | 1/4W 2. 2M | R115, 116 | ERDS2TJ472 | 1/4W 4. 7K | R356 | ERDS2TJ471 | 1/4W 470 |
| R27, 28 | ERDS2EJ121 | 1/4W 120 | R117, 118 | ERDS2TJ330 | 1/4W 33 | R357 | ERDS2TJ102 | 1/4W 1K |
| R29, 30 | ERDS2TJ103 | 1/4W 10K | R121, 122 | ERDS2TJ122 | 1/4W 1. 2K | R361, 362 | ERDS2TJ101 | 1/4W 100 |
| R31, 32 | ERDS2TJ273 | 1/4W 27K | R123, 124 | ERDS2TJ562 | 1/4W 5. 6K | R363, 364 | ERDS2TJ154 | 1/4W 150K |
| R33, 34 | ERDS2TJ183T | 1/4W 18K | R125, 126 | ERDS2TJ272T | 1/4W 2. 7K | R365, 366 | ERDS2TJ153 | 1/4W 15K |
| R35, 36 | ERDS2TJ474 | 1/4W 470K | R127, 128 | ERDS2TJ223 | 1/4W 22K | R369 | ERDS2TJ102 | 1/4W 1K |
| R37, 38 | ERDS2TJ272T | 1/4W 2. 7K | R129, 130 | ERDS2TJ183T | 1/4W 18K | R371 | ERDS2TJ102 | 1/4W 1K |
| R43, 44 | ERDS2TJ103 | 1/4W 10K | R131, 132 | ERDS2TJ104 | 1/4W 100K | R379 | ERDS2TJ102 | 1/4W 1K |
| R45, 46 | ERDS2TJ223 | 1/4W 22K | R133, 134 | ERDS2TJ562 | 1/4W 5. 6K | R405, 406 | ERDS2TJ242 | 1/4W 2. 4K |
| R47, 48 | ERDS2TJ472 | 1/4W 4. 7K | R135, 136 | ERDS2TJ682T | 1/4W 6. 8K | R407, 408 | ERDS2TJ562 | 1/4W 5. 6K |
| R49, 50 | ERDS2TJ122 | 1/4W 1. 2K | R137, 138 | ERDS2TJ123 | 1/4W 12K | R409, 410 | ERDS2TJ243T | 1/4W 24K |
| R51, 52 | ERDS2TJ330 | 1/4W 33 | R139, 140 | ERDS2TJ152 | 1/4W 1. 5K | R411, 412 | ERDS2TJ561 | 1/4W 560 |
| R53, 54 | ERDS2TJ562 | 1/4W 5. 6K | R141, 142 | ERDS2TJ103 | 1/4W 10K | R417 | ERDS2TJ151 | 1/4W 150 |
| R55, 56 | ERDS2TJ272T | 1/4W 2. 7K | R144, 145 | ERDS2TJ103 | 1/4W 10K | R418 | ERDS2TJ273 | 1/4W 27K |
| R57, 58 | ERDS2TJ103 | 1/4W 10K | R301 | ERDS2TJ1R0 | 1/4W 1. 0 | R522 | ERDS2TJ333 | 1/4W 33K |
| R59, 60 | ERDS2TJ332 | 1/4W 3. 3K | R302, 303 | ERDS2TJ183T | 1/4W 18K | R551-556 | ERDS2TJ473 | 1/4W 47K |

| Ref. No. | Part No. | Values & Remarks | Ref. No. | Part No. | Values & Remarks | Ref. No. | Part No. | Values & Remarks |
|-----------|--------------|------------------|-----------|--------------|------------------|-----------|--------------|------------------|
| R557, 558 | ERDS2TJ220T | 1/4W 22 | R839 | ERDS2TJ222 | 1/4W 2.2K | R960 | ERDS2TJ153 | 1/4W 15K |
| R559, 560 | ERDS2TJ152 | 1/4W 1.5K | R840 | ERDS2TJ102 | 1/4W 1K | R961 | ERDS2TJ221 | 1/4W 220 |
| R561 | ERDS2TJ102 | 1/4W 1K | R841 | ERDS2TJ473 | 1/4W 47K | R962 | ERDS2TJ103 | 1/4W 10K |
| R562 | ERDS2TJ471 | 1/4W 470 | R842 | ERDS2TJ183T | 1/4W 18K | R963 | ERDS2TJ392T | 1/4W 3.9K |
| R563, 564 | ERDS2TJ103 | 1/4W 10K | R843 | ERDS2TJ393 | 1/4W 39K | R964 | ERDS2TJ184T | 1/4W 180K |
| R565 | ERDS2TJ105T | 1/4W 1M | R844 | ERDS2TJ472 | 1/4W 4.7K | R965 | ERDS2TJ103 | 1/4W 10K |
| R566, 567 | ERDS2TJ103 | 1/4W 10K | R845 | ERDS2TJ823T | 1/4W 82K | R966 | ERDS2TJ223 | 1/4W 22K |
| R569 | ERDS2TJ105T | 1/4W 1M | R846 | ERDS2TJ101 | 1/4W 100 | R967 | ERDS2TJ821 | 1/4W 820 |
| R605 | ERD2FCVJ5R6T | 1/4W 5.6 Δ | R847 | ERDS2TJ122 | 1/4W 1.2K | R968, 969 | ERDS2TJ472 | 1/4W 4.7K |
| R606 | ERD2FCVJ4R7T | 1/4W 4.7 Δ | R852, 853 | ERD2FCVG470T | 1/4W 47 Δ | R973 | ERDS2TJ472 | 1/4W 4.7K |
| R607, 608 | ERDS2TJ102 | 1/4W 1K | R902 | ERDS2TJ822 | 1/4W 8.2K | R975, 976 | ERDS2TJ331 | 1/4W 330 |
| R609, 610 | ERDS2TJ1R5T | 1/4W 1.5 | R903 | ERDS2TJ393 | 1/4W 39K | R977, 978 | ERDS2TJ103 | 1/4W 10K |
| R611 | ERD2FCVG100T | 1/4W 10 Δ | R904, 905 | ERDS2TJ222 | 1/4W 2.2K | R979 | ERDS2TJ153 | 1/4W 15K |
| R612 | ERD2FCVG270T | 1/4W 27 Δ | R906 | ERDS2TJ103 | 1/4W 10K | R980-985 | ERDS2TJ393 | 1/4W 39K |
| R613 | ERDS2TJ102 | 1/4W 1K | R907 | ERDS2TJ563 | 1/4W 56K | R986 | ERDS2TJ103 | 1/4W 10K |
| R614 | ERDS2TJ222 | 1/4W 2.2K | R908-910 | ERDS2TJ103 | 1/4W 10K | R987 | ERDS2TJ472 | 1/4W 4.7K |
| R615, 616 | ERDS2TJ270T | 1/4W 27 | R911 | ERDS2TJ392T | 1/4W 3.9K | R990 | ERDS2TJ100 | 1/4W 10 |
| R617, 618 | ERQ16NKR15E | 1W 0.15 | R912 | ERDS2TJ222 | 1/4W 2.2K | R993 | ERDS2TJ103 | 1/4W 10K |
| R619-621 | ERDS2TJ560T | 1/4W 56 | R913 | ERDS2TJ272T | 1/4W 2.7K | R994 | ERDS2TJ102 | 1/4W 1K |
| R622 | ERQ16NKR15E | 1W 0.15 | R914 | ERDS2TJ152 | 1/4W 1.5K | R995, 996 | ERDS2TJ100 | 1/4W 10 |
| R623 | ERDS2TJ560T | 1/4W 56 | R915 | ERDS2TJ473 | 1/4W 47K | R997 | ERDS2TJ562 | 1/4W 5.6K |
| R624, 625 | ERDS2TJ270T | 1/4W 27 | R916 | ERDS2TJ272T | 1/4W 2.7K | R998 | ERDS2TJ100 | 1/4W 10 |
| R632 | ERD2FCVJ5R6T | 1/4W 5.6 Δ | R917, 918 | ERDS2TJ103 | 1/4W 10K | | | |
| R701 | ERDS2TJ821 | 1/4W 820 | R919 | ERDS2TJ471 | 1/4W 470 | | | CAPACITORS |
| R702 | ERDS2TJ102 | 1/4W 1K | R920-922 | ERDS2TJ103 | 1/4W 10K | | | |
| R703 | ERDS2TJ122 | 1/4W 1.2K | R923 | ERDS2TJ100 | 1/4W 10 | C1-3 | ECEA1HKA010B | 50V 1U |
| R704 | ERDS2TJ152 | 1/4W 1.5K | R924 | ERDS2TJ103 | 1/4W 10K | C5, 6 | ECEA1CKA220B | 16V 22U |
| R705 | ERDS2TJ182 | 1/4W 1.8K | R925 | ERDS2TJ223 | 1/4W 22K | C7-10 | ECBT1H561KB5 | 50V 560P |
| R706 | ERDS2TJ222 | 1/4W 2.2K | R926 | ERDS2TJ100 | 1/4W 10 | C11, 12 | ECBT1H102KB5 | 50V 1000P |
| R707 | ERDS2TJ332 | 1/4W 3.3K | R927 | ERDS2TJ223 | 1/4W 22K | C13, 14 | ECEA0JKA101B | 6.3V 100U |
| R708 | ERDS2TJ472 | 1/4W 4.7K | R928 | ERDS2TJ273 | 1/4W 27K | C15, 16 | ECQB1H682JZ3 | 50V 6800P |
| R709 | ERDS2TJ682T | 1/4W 6.8K | R931 | ERDS2TJ102 | 1/4W 1K | C17-20 | ECEA1EKA4R7B | 25V 4.7U |
| R710 | ERDS2TJ123 | 1/4W 12K | R932 | ERDS2TJ392T | 1/4W 3.9K | C21 | ECEA0JKA101B | 6.3V 100U |
| R713 | ERDS2TJ821 | 1/4W 820 | R933 | ERDS2TJ472 | 1/4W 4.7K | C25, 26 | ECEA1EKA4R7B | 25V 4.7U |
| R714 | ERDS2TJ102 | 1/4W 1K | R934 | ERDS2TJ105T | 1/4W 1M | C27, 28 | ECBT1H561KB5 | 50V 560P |
| R715 | ERDS2TJ122 | 1/4W 1.2K | R935 | ERDS2TJ182 | 1/4W 1.8K | C29, 30 | ECKR2H101KB5 | 500V 100P |
| R716 | ERDS2TJ152 | 1/4W 1.5K | R938, 939 | ERDS2TJ472 | 1/4W 4.7K | C31, 32 | ECBT1H181KB5 | 50V 180P |
| R717 | ERDS2TJ182 | 1/4W 1.8K | R941 | ERDS2TJ102 | 1/4W 1K | C33, 34 | ECEA1HKA4R7B | 50V 0.47U |
| R718 | ERDS2TJ222 | 1/4W 2.2K | R943 | ERDS2TJ103 | 1/4W 10K | C35, 36 | ECQB1H472JZ | 50V 4700P |
| R719 | ERDS2TJ332 | 1/4W 3.3K | R945 | ERDS2TJ822 | 1/4W 8.2K | C37, 38 | ECQB1H223JZ3 | 50V 0.022U |
| R720 | ERDS2TJ472 | 1/4W 4.7K | R948 | ERDS2TJ184T | 1/4W 180K | C39, 40 | ECQB1H103JZ | 50V 0.01U |
| R721 | ERDS2TJ682T | 1/4W 6.8K | R949 | ERDS2TJ103 | 1/4W 10K | C41, 42 | ECQB1H223JZ3 | 50V 0.022U |
| R722 | ERDS2TJ123 | 1/4W 12K | R950 | ERDS2TJ332 | 1/4W 3.3K | C43, 44 | ECQB1H153JZ | 50V 0.015U |
| R825, 826 | ERDS2TJ103 | 1/4W 10K | R951 | ERDS2TJ103 | 1/4W 10K | C45, 46 | ECBT1E103ZF | 25V 0.01U |
| R827 | ERDS2TJ563 | 1/4W 56K | R952 | ERDS2TJ392T | 1/4W 3.9K | C49, 50 | ECEA1CKA100B | 16V 10U |
| R828 | ERDS2TJ222 | 1/4W 2.2K | R953 | ERDS2TJ103 | 1/4W 10K | C53, 54 | ECQV1H563JZ3 | 50V 0.056U |
| R829 | ERDS2TJ392T | 1/4W 3.9K | R954 | ERDS2TJ223 | 1/4W 22K | C55 | ECBT1E103ZF | 25V 0.01U |
| R830 | ERDS2TJ103 | 1/4W 10K | R955 | ERDS2TJ821 | 1/4W 820 | C57, 58 | ECEA1AKA470B | 10V 47U |
| R831 | ERDS2TJ272T | 1/4W 2.7K | R956 | ERDS2TJ223 | 1/4W 22K | C63 | ECEA1CKA100B | 16V 10U |
| R832 | ERDS2TJ152 | 1/4W 1.5K | R957 | ERDS2TJ821 | 1/4W 820 | C64 | ECEA1HN010 | 50V 1U |
| R837 | ERDS2TJ473 | 1/4W 47K | R958 | ERDS2TJ223 | 1/4W 22K | C71, 72 | ECBT1H391KB5 | 50V 390P |
| R838 | ERDS2TJ272T | 1/4W 2.7K | R959 | ERDS2TJ821 | 1/4W 820 | C73, 74 | ECBT1C472KR5 | 16V 4700P |

| Ref. No. | Part No. | Values & Remarks | Ref. No. | Part No. | Values & Remarks | | | |
|-----------|--------------|------------------|-----------|--------------|------------------|--|--|--|
| C81-84 | ECBT1H4R7KC5 | 50V 4.7P | C405-408 | ECQB1H222JZ3 | 50V 2200P | | | |
| C101, 102 | ECBT1H102KB5 | 50V 1000P | C409, 410 | ECEA1HJR56B | 50V 0.56U | | | |
| C103, 104 | ECKR2H101KB5 | 500V 100P | C411, 412 | ECEA1HKAR33B | 50V 0.33U | | | |
| C105, 106 | ECBT1H561KB5 | 50V 560P | C413-416 | ECEA1EKA4R7B | 25V 4.7U | | | |
| C107, 108 | ECEA1HKA4R7B | 50V 0.47U | C551, 552 | ECEA1CKA100B | 16V 10U | | | |
| C109, 110 | ECBT1H181KB5 | 50V 180P | C553, 554 | ECEA0JKA101B | 6.3V 100U | | | |
| C111, 112 | ECQB1H273JZ | 50V 0.027U | C555 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C113, 114 | ECQB1H103JZ | 50V 0.01U | C556 | ECEA0JKA101B | 6.3V 100U | | | |
| C115, 116 | ECQV1H563JZ3 | 50V 0.056U | C557 | ECEA1EKA4R7B | 25V 4.7U | | | |
| C117, 118 | ECQB1H153JZ | 50V 0.015U | C558 | ECEA1HKA010B | 50V 1U | | | |
| C119, 120 | ECEA1EKA4R7B | 25V 4.7U | C559-562 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C121 | ECBT1E103ZF | 25V 0.01U | C601 | ECKR2H682PE | 500V 6800P | | | |
| C131, 132 | ECQB1H822JZ | 50V 8200P | C602, 603 | ECA1EM102B | 25V 1000U | | | |
| C133, 134 | ECQB1H153JZ | 50V 0.015U | C604, 605 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C135, 136 | ECQB1H822JZ | 50V 8200P | C606, 607 | ECEA1AKA221Q | 10V 220U | | | |
| C137, 138 | ECQB1H153JZ | 50V 0.015U | C608, 609 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C301 | ECQP1153JZ | 100V 0.015U | C610, 611 | ECEA1AJ102B | 10V 1000U | | | |
| C302 | ECEA1EKA4R7B | 25V 4.7U | C612 | ECEA1EU222B | 25V 2200U | | | |
| C303 | ECKR1H392KB5 | 50V 3900P | C613 | ECA1HM470B | 50V 47U | | | |
| C304, 305 | ECKW1H222KB5 | 50V 2200P | C615 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C306 | ECKD1H682KB | 50V 6800P | C801 | ECEA1HKA2R2B | 50V 2.2U | | | |
| C309 | ECKR1H103ZF5 | 50V 0.01U | C802 | ECCR1H470K5 | 50V 47P | | | |
| C310 | ECKR1H472KB5 | 50V 4700P | C803 | ECEA1CKA100B | 16V 10U | | | |
| C311 | ECA1AM471B | 10V 470U | C804 | ECQB1H822JZ | 50V 8200P | | | |
| C313, 314 | ECKT1H223ZF | 50V 0.022U | C901 | ECA0JM222B | 6.3V 2200U | | | |
| C315, 316 | ECKR2H821KB5 | 500V 820P | C903 | ECEA1HKA010B | 50V 1U | | | |
| C317, 318 | ECBT1H121KB5 | 50V 120P | C904 | ECEA1EKA4R7B | 25V 4.7U | | | |
| C319, 320 | ECQV1H473JZ3 | 50V 0.047U | C907 | ECKR1H103ZF5 | 50V 0.01U | | | |
| C321, 322 | ECQB1H223JZ3 | 50V 0.022U | C912 | ECKT1H122KB | 50V 1200P | | | |
| C323, 324 | ECQB1H103JZ | 50V 0.01U | C915 | ECBT1E103ZF | 25V 0.01U | | | |
| C325, 326 | ECKT1H122KB | 50V 1200P | C916 | ECEA1CKA100B | 16V 10U | | | |
| C328 | ECCR2H100K5 | 500V 10P | | | | | | |
| C331 | ECKR1H103ZF5 | 50V 0.01U | | | | | | |
| C332 | ECEA1CKA100B | 16V 10U | | | | | | |
| C351 | ECQP1153JZ | 100V 0.015U | | | | | | |
| C352 | ECEA1EKA4R7B | 25V 4.7U | | | | | | |
| C353 | ECKR1H392KB5 | 50V 3900P | | | | | | |
| C354, 355 | ECKW1H222KB5 | 50V 2200P | | | | | | |
| C356 | ECKD1H682KB | 50V 6800P | | | | | | |
| C359 | ECBT1E103ZF | 25V 0.01U | | | | | | |
| C360 | ECKR1H472KB5 | 50V 4700P | | | | | | |
| C361 | ECA1AM471B | 10V 470U | | | | | | |
| C363, 364 | ECKT1H223ZF | 50V 0.022U | | | | | | |
| C365, 366 | ECKR2H821KB5 | 500V 820P | | | | | | |
| C367, 368 | ECBT1H121KB5 | 50V 120P | | | | | | |
| C369, 370 | ECQV1H473JZ3 | 50V 0.047U | | | | | | |
| C371, 372 | ECQB1H223JZ3 | 50V 0.022U | | | | | | |
| C373, 374 | ECQB1H103JZ | 50V 0.01U | | | | | | |
| C375, 376 | ECKT1H122KB | 50V 1200P | | | | | | |
| C378 | ECCR2H100K5 | 500V 10P | | | | | | |
| C381 | ECKR1H103ZF5 | 50V 0.01U | | | | | | |
| C382 | ECEA1CKA100B | 16V 10U | | | | | | |

EXPLODED VIEW



REPLACEMENT PARTS LIST

Notes : * Important safety notice:

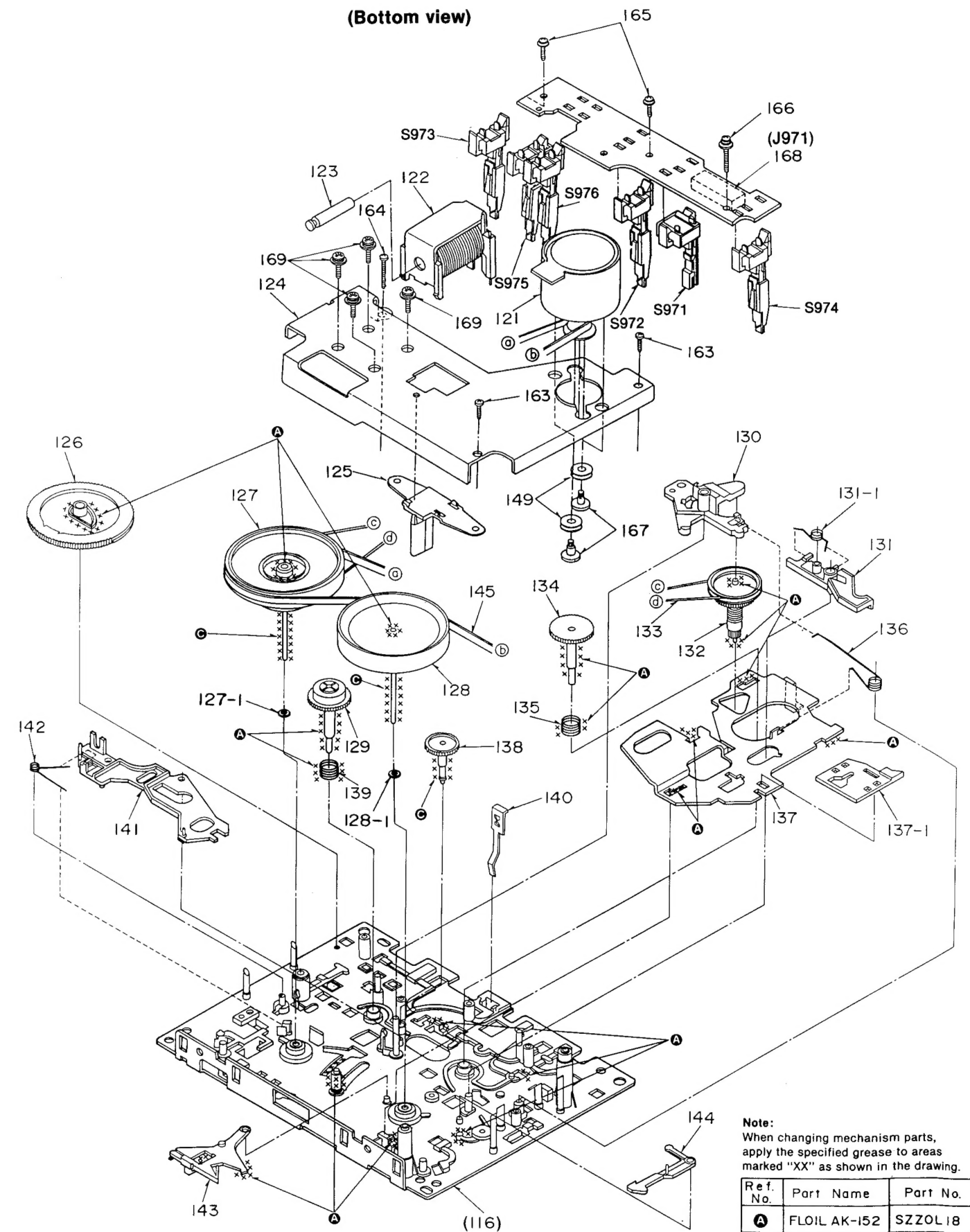
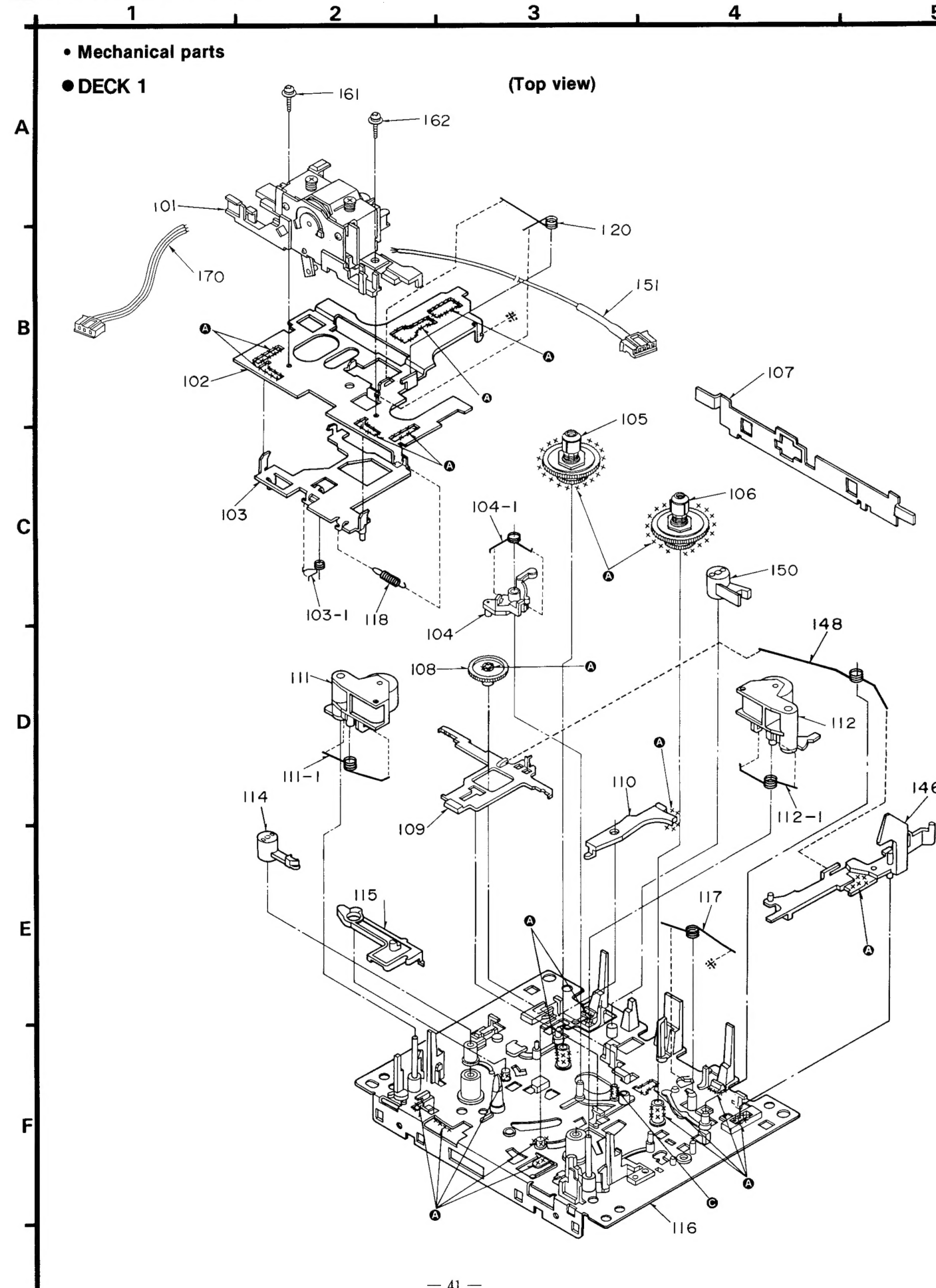
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|----------|--------------|--------------------------|------------------|
| | | | | | | ACCESSORIES | |
| | | CABINET AND CHASSIS | | | | | |
| | | | | A1 | RQF1078 | INSTRUCTION MANUAL UNIT | (E) |
| 1 | RHD30007 | SCREW | | A1 | RQF1079 | INSTRUCTION MANUAL UNIT | (EB) |
| 2 | RKMD024-2K | CABINET | | A1 | RQF1080 | INSTRUCTION MANUAL UNIT | (EG) |
| 3 | RYF0136-K | CASSETTE LID(DECK1) | | A1-1 | RFKSSX902E-K | INSTRUCTION MANUAL ASS'Y | (E) |
| 4 | RYF0137-K | CASSETTE LID(DECK2) | | A1-1 | RQT0984-B | INSTRUCTION MANUAL | (EB) |
| 5 | XTBS3+8JFZ1 | SCREW | | A1-1 | RQT0985-D | INSTRUCTION MANUAL | (EG) |
| 6 | RGR0102B-B | REAR PANEL | (EB) | A1-2 | RQA0013 | WARRANTY CARD | |
| 6 | RGR0102C-B | REAR PANEL | (EG) | A1-3 | RQCB0169 | SERVICENTER LIST | |
| 6 | RGR0102C-D | REAR PANEL | (E) | A2 | SJA187 | AC POWER SUPPLY CORD | (E, EG) Δ |
| 7 | RJS1A4802-A | AC OUTLET COVER | (EB) | A2 | SJA188 | AC POWER SUPPLY CORD | (EB) Δ |
| 7 | RJS1A4902-A | AC OUTLET COVER | (E, EG) | A3 | SJP2249-3 | STEREO CONNECTION CABLE | |
| 8 | RFKJSX502E-K | BOTTOM BOARD ASS'Y | | A4 | SJP2257T | L-TYPE CABLE | |
| 8-1 | RKA0011-2 | FOOT | | | | | |
| 9 | RKQ0089 | P. C. B. HOLDER | | | | | |
| 10 | RFKNSDN7AK | DAMPER GEAR ASS'Y(L) | | | | | |
| 11 | RFKNSDN7BK | DAMPER GEAR ASS'Y(R) | | | | | |
| 12 | RMN0049 | FL HOLDER | | | | | |
| 13 | RGG0066-K | FRONT AL. PANEL | | | | | |
| 14 | RFKGSX502E-K | FRONT PANEL ASS'Y | | | | | |
| 14-1 | RKWD124A-K1 | TRANSPARENT PLATE | | | | | |
| 15 | RGU0461-K | BUTTON, EJECT | | | | | |
| 16 | RGU0601-K | BUTTON, OPERATION | | | | | |
| 17 | RGU0603-K | BUTTON, COUNTER/SYNCHRO | | | | | |
| 18 | RGU0604-K | BUTTON, POWER | | | | | |
| 19 | RGU0605-K | BUTTON, REC | | | | | |
| 20 | RGW0098-K | KNOB, REC LEVEL | | | | | |
| 21 | RKF0169A-K | CASSETTE HOLDER | | | | | |
| 21-1 | QBP2006A | TAPE PRESSURE SPRING | | | | | |
| 22 | RMAD159-1 | MECHANISM ANGLE | | | | | |
| 23 | RMAD373 | EJECT ANGLE | | | | | |
| 24 | RME0068-1 | SPRING | | | | | |
| 25 | RML0185-1 | EJECT LEVER(L) | | | | | |
| 26 | RML0186-1 | EJECT LEVER(R) | | | | | |
| 27 | RMM0041 | EJECT ROD | | | | | |
| 28 | XTBS26+10J | SCREW | | | | | |
| 29 | XTB3+10JFZ | SCREW | | | | | |
| 30 | XTB3+20JFZ | SCREW | | | | | |
| | | | | | | | |
| | | PACKING MATERIAL | | | | | |
| | | | | | | | |
| P1 | RPG0845 | CARTON BOX | | | | | |
| P2 | RPN0383-1 | PAD | | | | | |
| P3 | SPSD152 | ACCESSORIES BOX | | | | | |
| P4 | SPP756 | PROTECTION COVER | | | | | |
| | | | | | | | |

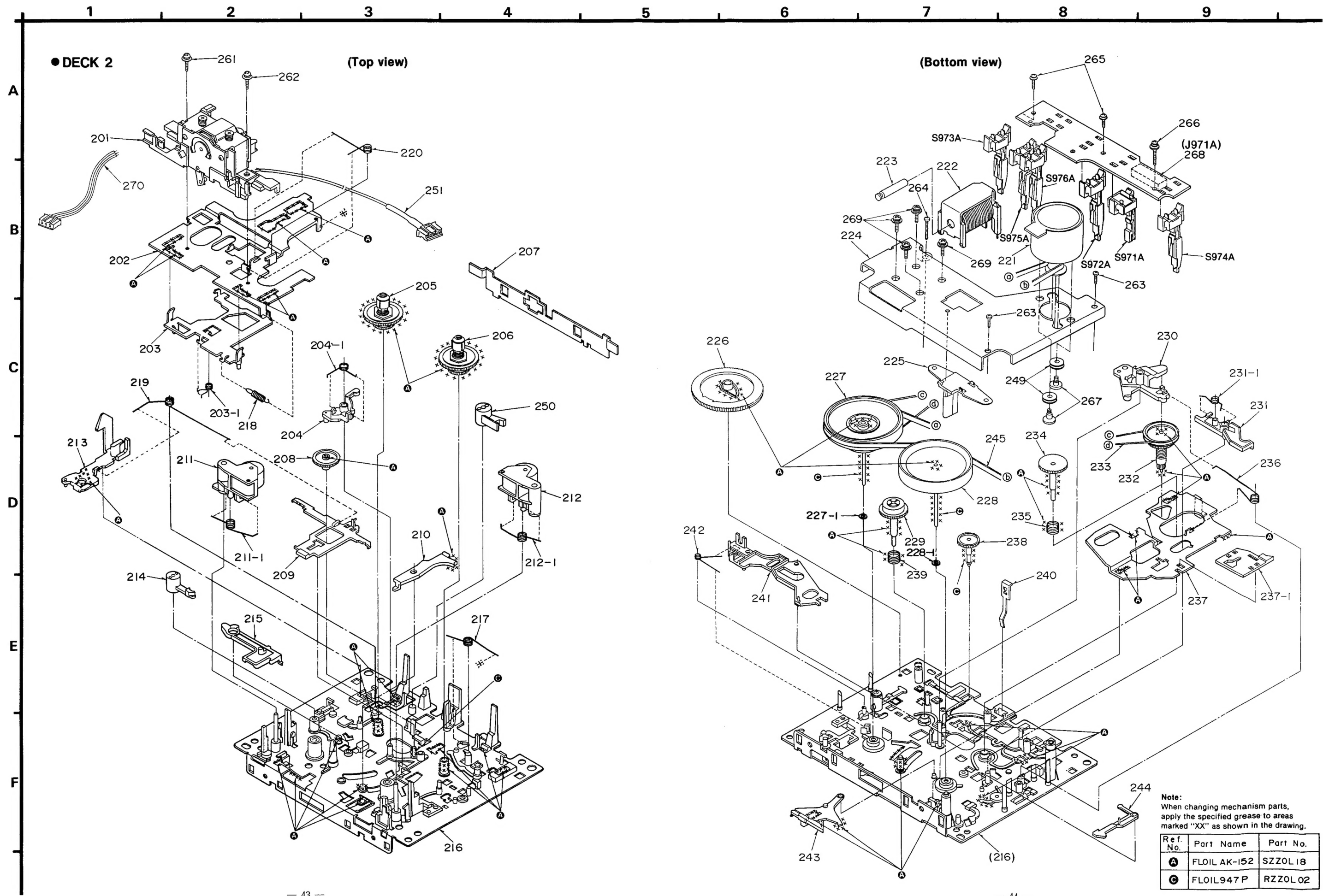
| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-----------|---------------------------|---------|----------|-----------|-------------------------|---------|
| | | MECHANISM PARTS LIST | | 143 | RUB515ZA | LEVER | |
| | | | | 144 | RUB509ZA | LEVER | |
| | | | | 145 | RDV0015 | CAPSTAN BELT | |
| DECK1 | | | | 146 | RUB507ZD | EJECT ROD(R) | |
| 101 | RXQ0008 | HEAD BLOCK(REC./PLAYBACK) | | 148 | RJW144ZA | SPRING | |
| 102 | RJA793ZF | HEAD BASE | | 149 | RHG3032ZA | RUBBER CUSHION | |
| 103 | RZLAR300 | ROD | | 150 | RNL180ZB | DAMPER ARM | |
| 103-1 | RJW143ZA | SPRING | | 151 | REX0059 | LEAD WIRE BLOCK(5P) | |
| 104 | 1UB0089ZA | ARM | | 161 | XTW2+6L | SCREW | |
| 104-1 | RJW148ZA | SPRING | | 162 | XTW2+8L | SCREW | |
| 105 | 1DM0018ZA | REEL TABLE(R) | | 163 | XTN26+7J | SCREW | |
| 106 | 1DM0017ZA | REEL TABLE(F) | | 164 | RHE5203ZA | SCREW | |
| 107 | RML0069-1 | LEVER | | 165 | XTW2+8S | SCREW | |
| 108 | RDG57722C | GEAR | | 166 | XYC2+JF16 | SCREW | |
| 109 | RUB508ZB | BRAKE ROD | | 167 | RHD26002 | SCREW | |
| 110 | RUB506ZB | LEVER | | 168 | RJS10T7ZA | CONNECTOR(10P), J971 | |
| 111 | 1UB0088ZA | ARM(R) | | 169 | RHD26003 | SCREW | |
| 111-1 | RJW141ZA | SPRING | | 170 | REX0145 | READ WIRE BLOCK(3P) | |
| 112 | 1UB0087ZA | ARM(F) | | | | | |
| 112-1 | RJW140ZC | SPRING | | | | | |
| 114 | RNL1ZD | DAMPER ARM | | | | | |
| 115 | RUB503ZD | MAIN LEVER | | | | | |
| 116 | RZUSX980 | CHASSIS | | | | | |
| 117 | RJW142ZA | SPRING | | | | | |
| 118 | RJD105ZA | SPRING | | | | | |
| 120 | RJW139ZA | SPRING | | | | | |
| 121 | RFM133ZA | DC MOTOR | | | | | |
| 122 | 1UE0015ZA | PLUNGER | | | | | |
| 123 | RUB428ZE | MOVING IRON CORE | | | | | |
| 124 | RJL1030XB | ANGLE | | | | | |
| 125 | RMD5014ZC | ANGLE | | | | | |
| 126 | RDG5927ZG | GEAR | | | | | |
| 127 | 1DW0053ZB | FLYWHEEL(F) | | | | | |
| 127-1 | RNW139ZA | WASHER | | | | | |
| 128 | 1DW0054ZB | FLYWHEEL(R) | | | | | |
| 128-1 | RNW138ZA | WASHER | | | | | |
| 129 | 1DG0006ZA | REEL TABLE GEAR | | | | | |
| 130 | RUB513ZD | ARM | | | | | |
| 131 | 1UB0091ZA | LEVER | | | | | |
| 131-1 | RJW146ZA | SPRING | | | | | |
| 132 | 1DR0011ZA | MAIN PULLEY | | | | | |
| 133 | RDV902B | BELT | | | | | |
| 134 | RDG5769ZA | REEL TABLE GEAR | | | | | |
| 135 | RJQ111ZB | SPRING | | | | | |
| 136 | RJW145ZA | SPRING | | | | | |
| 137 | 1UB0090ZA | ROD | | | | | |
| 137-1 | RUB512ZB | F. F. ROD | | | | | |
| 138 | RDG5773ZB | GEAR | | | | | |
| 139 | RJQ112ZA | SPRING | | | | | |
| 140 | RJS609ZC | TAPE PRESSURE SPRING | | | | | |
| 141 | RUB514ZC | LEVER | | | | | |
| 142 | RJW147ZA | SPRING | | | | | |

EXPLODED VIEWS



Note:
When changing mechanism parts,
apply the specified grease to areas
marked "XX" as shown in the drawing.

| Ref. No. | Part Name | Part No. |
|-------------|--------------|----------|
| A | FLOIL AK-152 | SZZOL18 |
| C | FLOIL947P | RZZOL02 |



REPLACEMENT PARTS LIST

| Ref. No. | Part No. | Part Name & Description | Remarks | Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|-----------|-----------------------------|---------|----------|-----------|-------------------------|---------|
| | | MECHANISM PARTS LIST | | 241 | RUB514ZC | LEVER | |
| | | | | 242 | RUW147ZA | SPRING | |
| | | | | 243 | RUB515ZA | LEVER | |
| DECK2 | | | | 244 | RUB509ZA | LEVER | |
| 201 | RXQ0008 | HEAD BLOCK (REC. /PLAYBACK) | | 245 | RDV0015 | CAPSTAN BELT | |
| 202 | RUA793ZF | HEAD BASE | | 249 | RHG3032ZA | RUBBER CUSHION | |
| 203 | RZLAR300 | ROD | | 250 | RNL180ZB | DAMPER ARM | |
| 203-1 | RUW143ZA | SPRING | | 251 | REX0059 | LEAD WIRE BLOCK (5P) | |
| 204 | 1UB0089ZA | ARM | | 261 | XTW2+6L | SCREW | |
| 204-1 | RUW148ZA | SPRING | | 262 | XTW2+8L | SCREW | |
| 205 | 1DM0018ZA | REEL TABLE (R) | | 263 | XTN26+7J | SCREW | |
| 206 | 1DM0017ZA | REEL TABLE (F) | | 264 | RHE5203ZA | SCREW | |
| 207 | RML0069-1 | LEVER | | 265 | XTW2+8S | SCREW | |
| 208 | RDG5772ZC | GEAR | | 266 | XYC2+JF16 | SCREW | |
| 209 | RUB508ZB | BRAKE ROD | | 267 | RHD26002 | SCREW | |
| 210 | RUB506ZB | LEVER | | 268 | RJS1077ZA | CONNECTOR (10P), J971A | |
| 211 | 1UB0088ZA | ARM (R) | | 269 | RHD26003 | SCREW | |
| 211-1 | RUW141ZA | SPRING | | 270 | REX0145 | LEAD WIRE BLOCK (3P) | |
| 212 | 1UB0087ZA | ARM (F) | | | | | |
| 212-1 | RUW140ZC | SPRING | | | | | |
| 213 | RUB541ZB | EJECT ROD (L) | | | | | |
| 214 | RNL1ZD | DAMPER ARM | | | | | |
| 215 | RUB503ZD | MAIN LEVER | | | | | |
| 216 | RZUSX980 | CHASSIS | | | | | |
| 217 | RUW142ZA | SPRING | | | | | |
| 218 | RUD105ZA | SPRING | | | | | |
| 219 | RUW167ZA | SPRING | | | | | |
| 220 | RUW139ZA | SPRING | | | | | |
| 221 | RFM133ZA | DC MOTOR | | | | | |
| 222 | 1UE0015ZA | PLUNGER | | | | | |
| 223 | RUB428ZE | MOVING IRON CORE | | | | | |
| 224 | RJL1030XB | ANGLE | | | | | |
| 225 | RMD5014ZC | ANGLE | | | | | |
| 226 | RDG5927ZG | GEAR | | | | | |
| 227 | 1DW0053ZB | FLYWHEEL (F) | | | | | |
| 227-1 | RNW139ZA | WASHER | | | | | |
| 228 | 1DW0054ZB | FLYWHEEL (R) | | | | | |
| 228-1 | RNW138ZA | WASHER | | | | | |
| 229 | 1DG0006ZA | REEL TABLE GEAR | | | | | |
| 230 | RUB513ZD | ARM | | | | | |
| 231 | 1UB0091ZA | LEVER | | | | | |
| 231-1 | RUW146ZA | SPRING | | | | | |
| 232 | 1DR0011ZA | MAIN PULLEY | | | | | |
| 233 | RDV90ZB | BELT | | | | | |
| 234 | RDG5769ZA | REEL TABLE GEAR | | | | | |
| 235 | RUQ111ZB | SPRING | | | | | |
| 236 | RUW145ZA | SPRING | | | | | |
| 237 | 1UB0090ZA | ROD | | | | | |
| 237-1 | RUB512ZB | F. F. ROD | | | | | |
| 238 | RDG5773ZB | GEAR | | | | | |
| 239 | RUQ112ZA | SPRING | | | | | |
| 240 | RUS609ZC | TAPE PRESSURE SPRING | | | | | |